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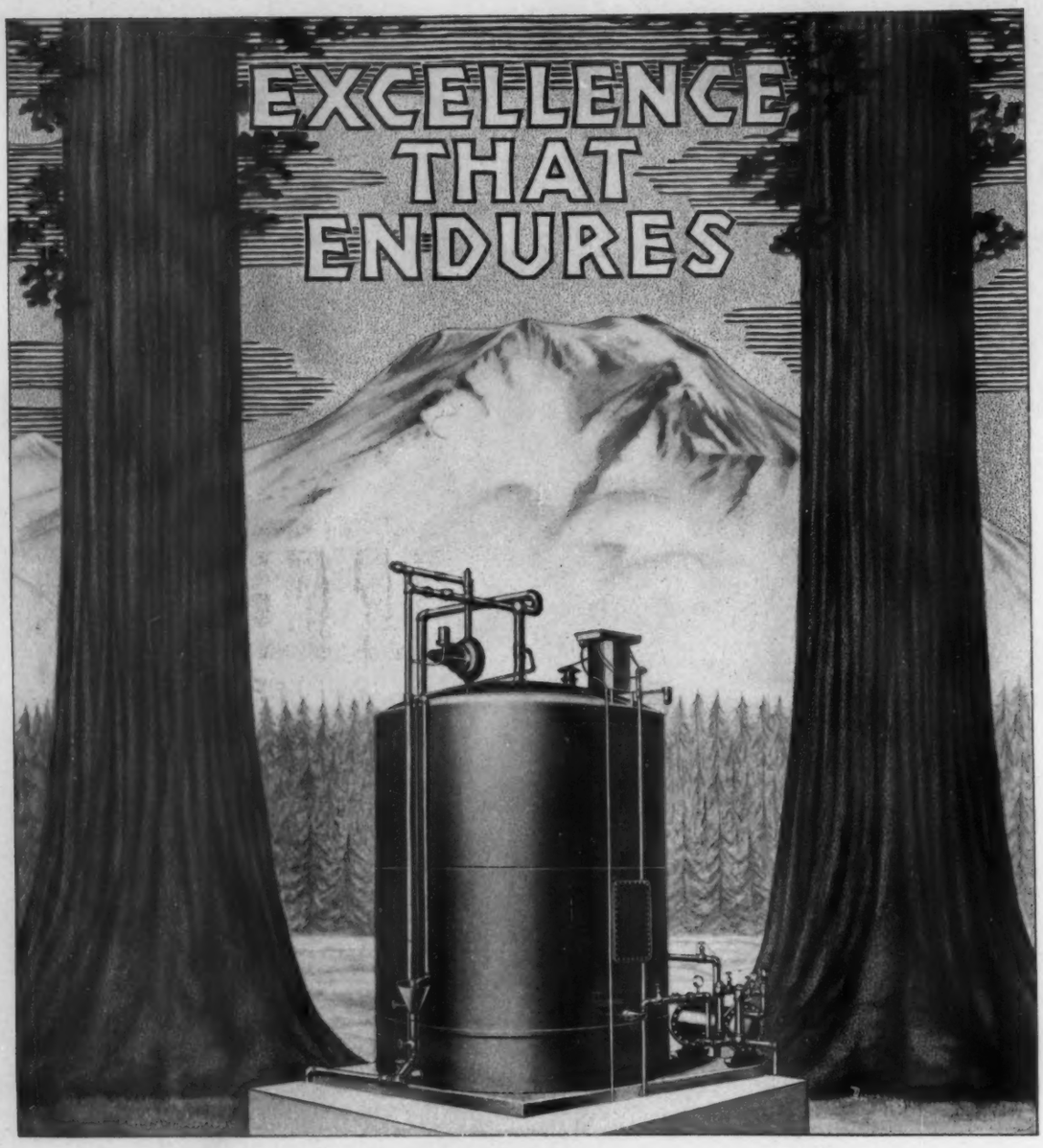

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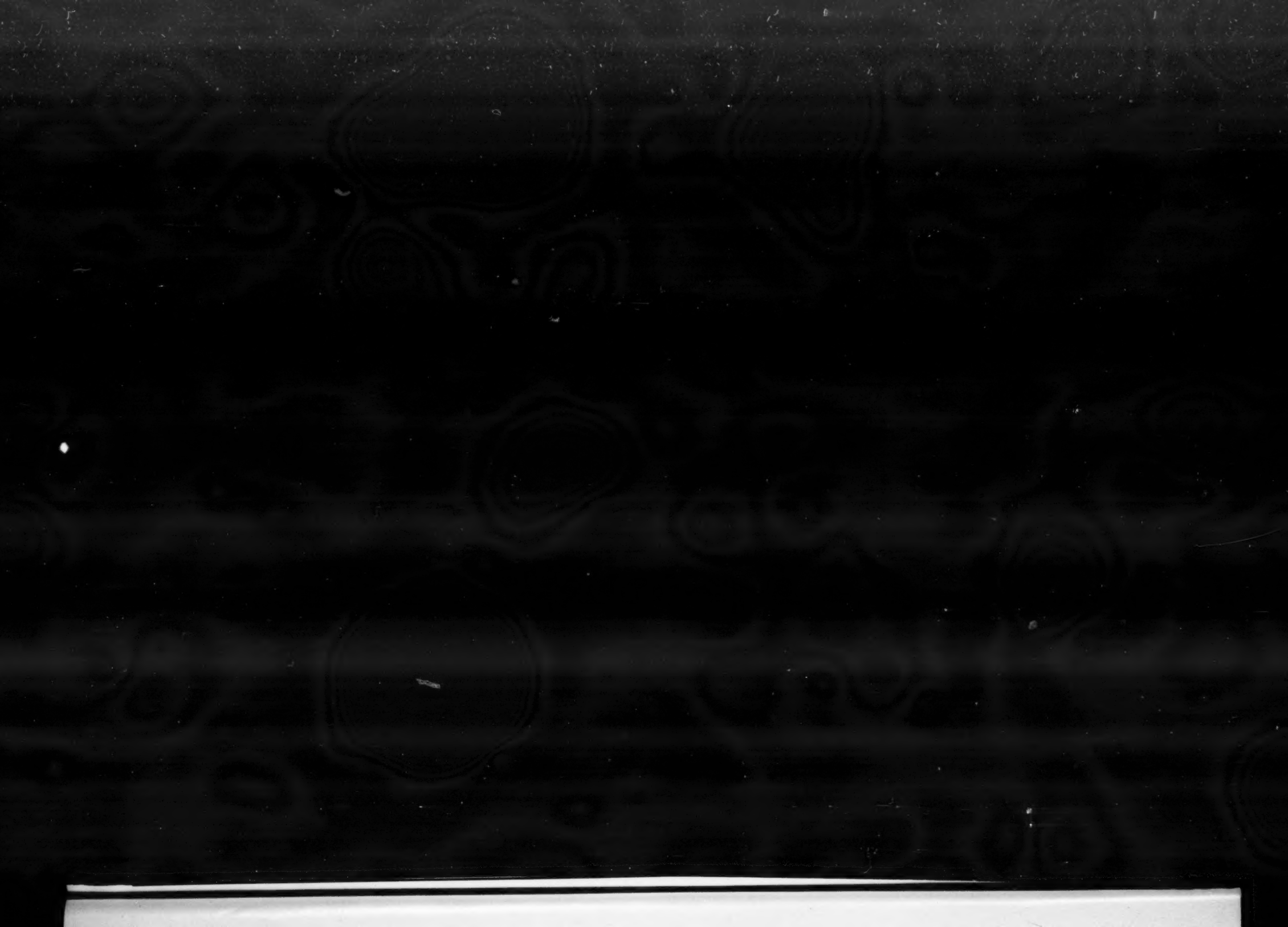

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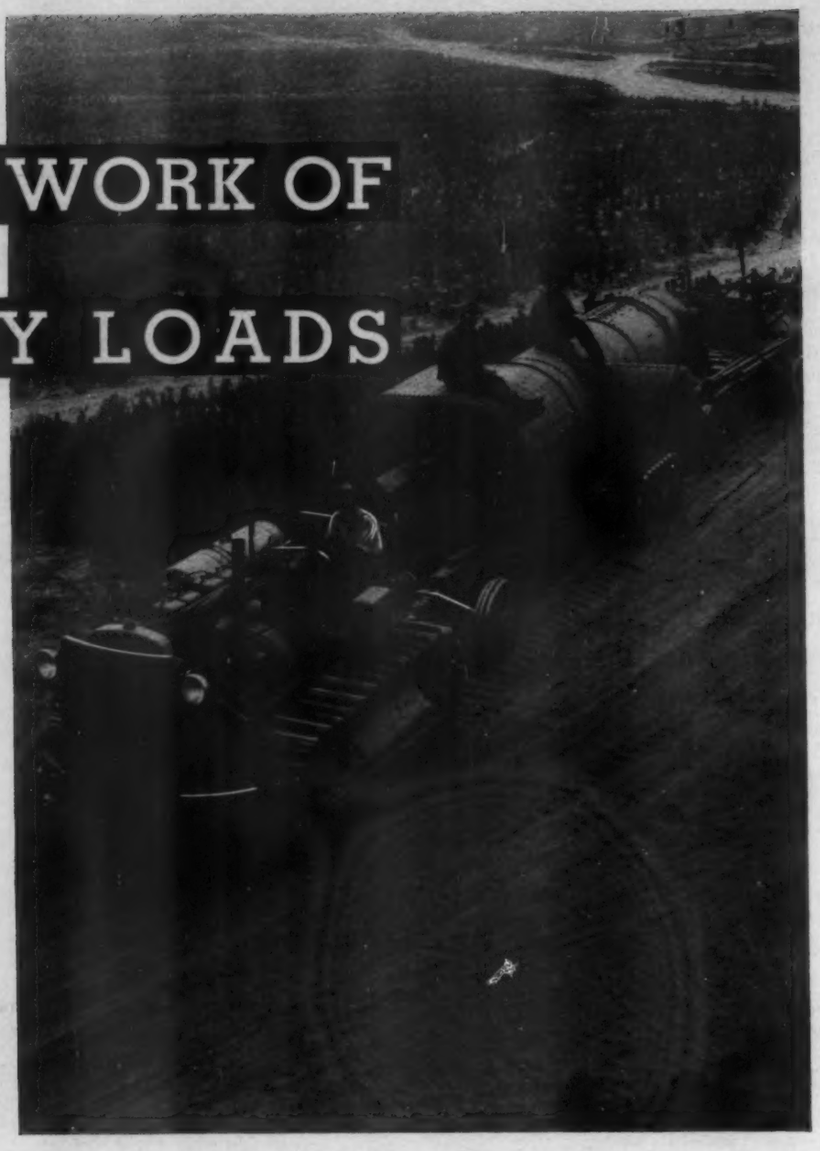

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TRACTOR

Better Price Level in Petroleum Industry Would Discourage the Assessment of High Taxes

By ANDREW M. ROWLEY

REGULATIONS issued by the Railroad Commission of Texas calling for certified reports regarding transportation of crude oil will make more difficult illegal production in that area. Stoppage of this evil is of paramount importance to every branch of the petroleum industry, not only in Texas, but elsewhere throughout the United States. Crude oil produced in excess of allowables finds markets under regularly posted prices, depriving operators abiding by regulations not only of this business but of better prices for their product.

Low prices for crude oil and gasoline are the indirect cause of the excessive taxes levied on the petroleum industry. If better prices prevailed for these products the high tax levies assessed against them by states and cities would bring the total cost to the motorist to a point where he would feel the burden more and would be in a mood to align himself with an active campaign for a reduction in these taxes. Even with unreasonable taxes, the total cost to the motorist still is so low there is not the incentive to combat further increases and take an active part in efforts to procure a decrease in existing tax rates.

Refiners are still failing to co-operate in the movement to reduce burdensome and menacing stocks of gasoline. The reduction of 1,200,000 barrels last week really is not a criterion of the situation as many refineries are operating their plants during the first three weeks of the month and shutting down the last week. Consequently, a substantial withdrawal from storage during the last week of the month is to be expected. This quantity withdrawn, if spread over a period of a month, is far below the figure necessary to strengthen this situation.

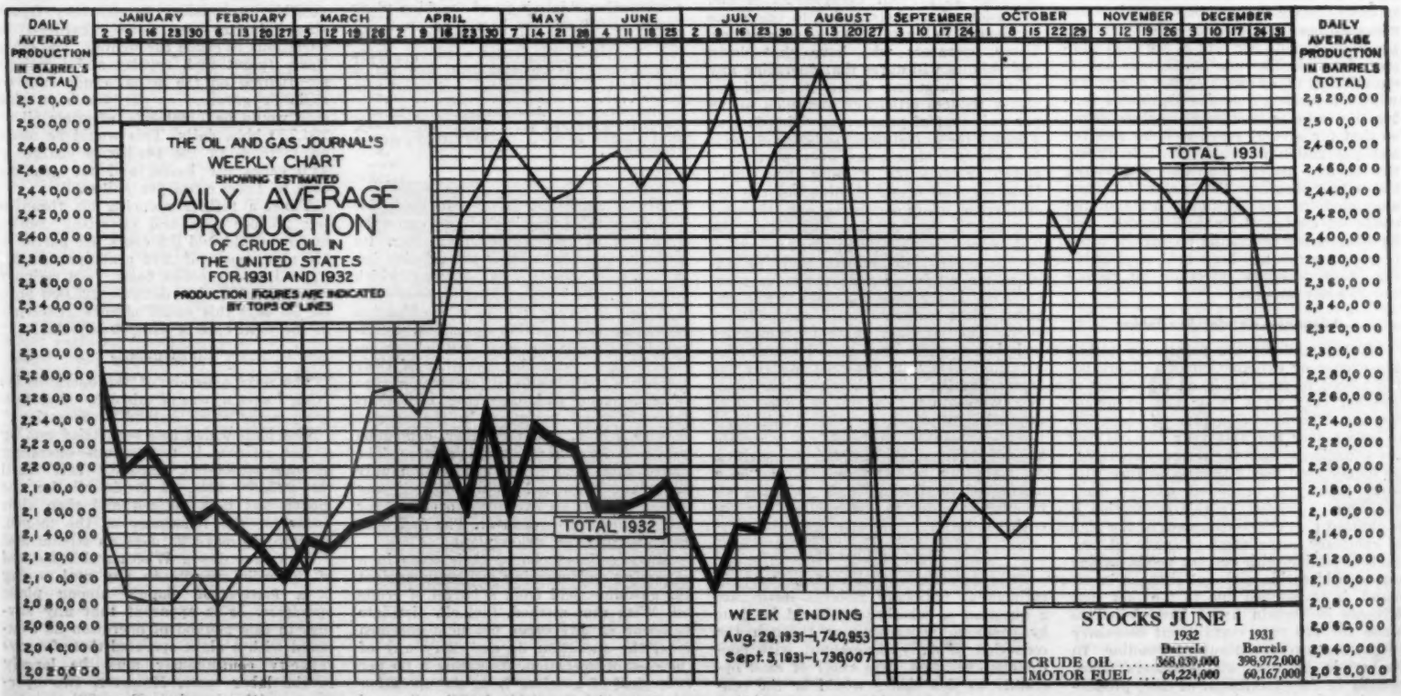
The improved position of the industry in general is being reflected in reports of oil companies for the second quarter of this year. While low inventory values established last year may account for much of the better showing higher prices effective since April undoubtedly proved an influential contributing factor. The industry should not be content merely to hold existing price schedules but should continue its efforts to get the business back to a better price level. Better price levels are absolutely necessary for the return to prosperity of all business in the United States.

Crude Oil Production in the United States

Estimated daily average production for the week ending July 30, and a comparison with previous week and one year ago, follows:

	July 30	July 23	Aug. 1, 1931
Oklahoma—			
Oklahoma City	73,910	126,115	65,840
Seminole-St. Louis	111,720	117,720	133,910
Remainder of State	208,185	210,085	224,980
Total Oklahoma	393,815	453,920	424,730
East Texas—			
Lathrop	125,594	129,896	136,996
Kilgore	100,022	104,515	233,714
Joiner	105,010	111,087	226,841
Total East Texas	330,626	345,498	597,551
West Texas	178,305	177,512	206,312
North Central Texas	74,196	74,137	79,892
Texas Panhandle	56,851	53,862	54,348
East Central Texas	57,946	57,536	47,449
Gulf Coast Texas	115,432	112,295	118,739
Southwest Texas	61,687	60,578	64,579
Total State of Texas	875,043	881,418	1,168,870
Kansas	95,855	96,380	99,540
North Louisiana	29,915	29,915	32,360
Gulf Coast Louisiana	31,648	32,461	27,420
Arkansas	34,140	34,155	38,630
Eastern fields	117,000	118,000	105,000
Rocky Mountain area	84,250	81,510	92,873
California—			
Santa Fe Springs	57,750	58,750	62,250
Long Beach	68,250	69,000	73,500
Playa Del Rey	14,500	14,500	24,000
Elwood	14,000	14,250	25,750
Kettleman Hills	61,500	62,000	60,000
Remainder of State	254,000	251,500	255,500
Total California	470,000	470,000	501,000
Total United States	2,131,666	2,197,759	2,490,423

Decrease 66,093 Bbls. Daily



Refinery Managers Interested in Most Economical Method of Curtailing Operations of Plants

By C. O. WILLSON

"What is the best method of curtailing refinery operations?"

This question has been foremost in the considerations of practically all refiners in recent months due to the fact that a large majority of them have found it necessary to curtail their plant operations from 10 to as high as 50 per cent based on their rated capacities. The question is becoming increasingly important due to the fact that additional reductions probably will be necessary over the coming fall and winter months.

In fact, many operators are wondering if the refining branch of the industry is not faced with a permanent condition in which it will be necessary over a part of the year at least to restrict operations based on seasonal changes in demand for refinery products and the varying positions of individual companies brought about by competitive conditions in the sale of their products to consumers.

Students of developments in all phases of the oil industry are pointing to fundamental changes which must of necessity be reflected in refinery operations if the industry generally is to prosper. In the past it has been assumed that a refinery must operate 24 hours daily, 365 days out of the year. It was felt that this was necessary because it was not feasible to shut down operations for brief or long periods. It was claimed that the shutdowns would prove disastrous from several operating angles and result in prohibitive costs per unit of output.

In regard to refineries it was also pointed out that the owners had no control of their crude oil supply, the feast and famine method of producing, making it necessary for the refiners to take their raw material when and where it was available regardless of whether there was an outlet currently for the products obtained in the manufacturing processes.

The results of this method of operation are generally known. The refining industry as a unit has maintained its operations on approximately the same monthly basis despite the fact that actual winter consumption of gasoline — the principal product—was 65 per cent of the peak summer demand. The net result was an accumulation of excess gasoline during the winter months which was liquidated during the summer months at distress prices so that for several years refiners received less per gallon for their gasoline during the summer months than they did during the winter months. This policy in effect amounted to an artificial demand for crude oil during the winter months and by stimulating producing operations often in recent years has been held responsible for excess supplies of crude oil during the summer months.

Adequate Crude Available

Market students are pointing out that the excuse or explanation of refiners being forced to take crude oil regardless of whether they want to or not no longer applies. The proration plan of operation in effect over the past year has changed the situation so that the refinery operators no longer need fear a famine because with large potentials, crude oil will be made available as needed. In this connection it is claimed that the continuance of the plan of arbitrary curtailment of crude oil production in line with current needs, taking into consideration seasonal changes in demand, is threatened due to the fact that refiners in certain areas have failed to make the pro rata curtailment necessary to prevent excess output of gasoline. In the crude oil end, all producers share equally in the curtailment of their production based on actual and potential production. Obviously this same plan of operation must be carried on to the refining branch if such a program is to be successful and merit general support.

With the problem of crude oil supplies settled satisfactorily, the remaining question is concerned with how far the refiner can go in varying plant operations to meet the requirements of his own marketing department taking into consideration the part he must contribute to the well-being of the industry. The reply to the operator who says, "You can't shut down a refinery," is that it is being done by several operators without experiencing the disasters predicted.

Those refinery managers who take the position that it is impossible to shut down their plants as is done in practically every other type of manufacturing in order to prevent overproduction and ruination of markets, point to the losses incidental to curtailment of operations. Those operators who have shut down their plants will agree that operating any refinery equipment under its rated capacity reduces efficiency and adds to the per unit cost of production. This is true whether the curtailment is brought about by complete shutdowns over part of a month or reduction of daily throughput. However, the factor dominating the operations of many companies over the past few months has not been to obtain the last ounce of efficiency in plant operation but to support the efforts made to stabilize the crude oil and consuming markets, the latter showing a decline in demand when compared with the previous year. The officials of these companies feel that they can well afford to sacrifice plant efficiency in order to prevent the demoralization of crude oil price schedules, which in turn would be reflected in unprofitable prices for the finished refinery products. In brief, as expressed by one refinery operator this proposition of curtailing refinery operations "is a matter of sacrificing cents in plant efficiency in order to save dollars for the entire industry."

How to Curtail

The question of lowering refinery throughput naturally resolves itself into a question of whether it should be done by complete shutdowns or through the reduction of daily throughput with continuous operation. The reply of most operators to this choice would be the continuous operation, the assumption being that it would be fatal to attempt any plan in which the still burners would be turned off, pumps stopped and all the other major features of operation cease. These operators when they are compelled to operate at what amounts to a part time basis simply slow up the charging pumps at the crude oil and cracking stills and adjust all other operations accordingly. In the major features of operation many expenses are about the same as when operating at capacity, which of course means that the cost per unit of output mounts directly as the operation is curtailed.

For the purpose of pointing out several phases of this problem obtained in interviews with representative executives and plant managers in the Mid-Continent area, the following table was prepared showing the cost per barrel in operating combination skimming and cracking plant (costs based on per barrel of crude oil throughout):

	Cents per bbl.
Plant fuel	9.00
Labor	5.70
Depreciation and obsolescence	12.00
Royalty (cracking)	7.00
Maintenance	1.50
Treating	.8
Total	36.00

No claims for accuracy are made for the above table and it does not cover the operation of any particular refiner. Its main purpose is to show the relative importance of the several factors which enter into the refinery cost of processing a barrel of crude oil in a combination skimming and cracking operation. Refiners do not have the same method for determining costs in the operation of their refineries and due to differences in type of equipment and operating conditions there is some variation in the several factors, which, taken together, determine profit or loss in refinery operation. The above data take into consideration only the plant costs and do not include any sales, traffic or executive overhead or interest on the investment. The fuel item includes fuel for steam plant.

Many refiners charge their costs in a skimming and cracking operation against the gasoline yield from a barrel of crude oil. With that method, fuel oil, distillate kerosene or any other products obtained from the operation do not carry any of the cost of operation. Assuming a 65 per cent yield of gasoline from the operation there would be a yield of 27.3 gallons of gasoline for each barrel of crude oil processed. Taking this yield with the same cost factors as given in the previous table and the cost per gallon of gasoline would be as follows:

	Cents per gallon
Plant fuel	.33
Labor	.208
Depreciation and obsolescence	.440
Royalty (cracking)	.256
Maintenance	.055
Treating	.029
Total	1.318

Thus, assuming the foregoing data to be correct, the plant cost in skimming and cracking a barrel of Mid-Continent crude of average gravity (38 A.P.I.) is 36 cents per barrel or 1.318 cents per gallon of gasoline obtained by the refining operation.

These tables are based on capacity operation of plant equipment. For the purpose of illustrating comparative conditions let it be assumed that the costs shown cover a refinery in which 10,000 bbls. of crude oil are refined daily with a yield of 6,500 bbls. of finished gasoline. This would mean that the cost of operating the refinery is $3,600 daily, or figured another way the refinery would yield 273,000 gallons of gasoline costing 1.318 cents per gallon.

Curtailing Operations

If the crude oil runs to stills are reduced 25 per cent to 7,500 bbls. daily, with a continuous operation, labor, depreciation and maintenance would continue to be figured on a 10,000-bbl. basis. By that is meant the depreciation, labor and maintenance costs are the same whether the plant is operating capacity or 75 per cent capacity. Many operators would modify this statement slightly, pointing out that some labor saving is possible and the depreciation and maintenance item is also not so large when operating capacity. Other operators, however, take the position that the difference, if any, is so small that it is impossible to consider it and they figure these charges the same regardless of variations in crude throughput. The other items (plant fuel, royalty and treating) are figured on the actual crude runs to stills or gasoline output which in this case would be 7,500 bbls. of crude oil or 204,750 bbls. daily. This would be mean an increase in the per-barrel charge to 41.9 cents per barrel and the gasoline cost to 1.534 cents per gallon.

Thus, a refiner reducing his throughput 25 per cent and operating continuously would add 5.8 cents per barrel to his plant costs of .216 cents per gallon, figured on a gasoline basis. In a refinery running 7,500 bbls. daily or 225,000 bbls. for 30 days this would mean a difference in the total cost of $13,000 monthly.

Labor Saving

The next question of the operator is: "Can I save a part of this $13,000 monthly by some other method of operation?"

The plan which has been tried out by a few refiners is to continue operating at the 10,000-bbl. capacity rate until the 225,000 bbls. of crude oil for the month has been refined and then shut down for the remainder of the month. This would mean 23 days on stream and 7 days shut down. Whether this method of operation results in any real saving is a matter of dispute among plant operators. It is apparent that any savings in this method of operation as compared with a plant operated three-fourths capacity continuously must be largely in the labor costs. However, two oper-

(Continued on Page 30)

Is It Feasible to Operate Refineries Part Time?

The fundamental change in the oil industry brought about by the large potential production of crude oil now being curtailed to meet current requirements has brought new problems to the refining industry. Plant operators no longer need to fear shortages of crude oil supplies and they are now faced with the necessity of varying operations in line with seasonal changes in demand to prevent the accumulation of excess material which always brings disaster to all the industry's markets.

One of the angles to this problem is the question of whether or not it is feasible to follow the policy of other manufacturers and curtail operations through shut downs during part of the slack season. Refiners in the past have taken the position that their plants must operate continuously and if they must curtail they have simply slowed up their operations with most of the expenses the same as when the plant was operating capacity.

Due to changes in plant equipment and operating methods several plant managers now believe that it is more practicable to operate at capacity part time and then shut down the major phases of plant operation to provide whatever curtailment is necessary to keep output in line with current needs. In the accompanying article some of the phases of this problem are discussed.

Consolidated Oil Offer for Richfield Accepted; Negotiations for Rio Grande Under Way

LOS ANGELES, Calif., July 30.—An offer of approximately $22,862,000 for assets of the Richfield Oil Co., made by Harry F. Sinclair's Consolidated Oil Corp., has been accepted by a committee representing Richfield bondholders, Pan American bondholders and unsecured Richfield creditors.

The Richfield company has been in equity receivership since early in 1930. The offer included up to $5,000,000 to satisfy dissenters to the reorganization plan. The deal was negotiated by Henry Lockhart, New York banker, who brought about the merger of the Prairie and Sinclair companies now forming the Consolidated Oil Corp.

The committee's acceptance was made two hours before expiration of the time limit set by the Standard Oil Co. of California on a bid equivalent to $17,000,000.

Creditors' Committee

Because consummation of the transaction is conditional on a sufficient number of assenters, a program will be submitted to individual bondholders and creditors by a committee consisting of Jefferson Chandler, representing unsecured Richfield creditors; Alexander MacDonald representing Richfield bondholders; and Robert C. Adams, representing Pan American bondholders. Chandler and MacDonald are of Los Angeles and Adams is of New York.

The items of the offer were $17,500,000 in 6 per cent 15-year Consolidated debentures, $2,500,000 in cash, 300,000 shares of Consolidated common stock, $500,000 for the expense of committees and the maximum of $5,000,000 to satisfy those who do not assent to the plan.

The equity receiver is William C. McDuffie. He has been mentioned for the post of chief executive of the reorganized concern.

Richfield bonds totaled about $25,000,000. Its subsidiary, Pan American, had about $10,000,000 in bonds and approximately $25,000,000 was owing unsecured creditors.

The reorganization committee will evaluate property under Richfield and Pan American bonds and unmortgaged property to determine how much of the purchase price is to be set aside for division by each group. One division mentioned is 25.5 per cent for Richfield bondholders, 26 per cent for Pan American bondholders and 48.5 per cent for unsecured credits.

After that has been decided, the contract with the groups will be completed and 30 days will be allowed for deposit of securities.

The committees which accepted the offer said they represented 25 per cent of the bondholders and close to 50 per cent of the unsecured creditors. The amount of deposits necessary to declare the plan of reorganization operative is expected to be something in excess of 51 per cent. When sufficient securities have been deposited legal steps will be taken to dissolve the receivership and transfer the assets.

$6,000,000 Expansion

Commenting on the deal H. F. Sinclair was quoted as saying:

"I am gratified that the representatives of the bondholders and secured creditors of Richfield have decided to recommend our bid to the holders of Richfield obligations. If, as and when we are able to acquire these properties, we plan to build up our interests in the oil industry on the Pacific Coast."

Consolidated Oil Corp. will spend $6,000,000 and maybe more, if, as and when it acquires Richfield Oil Co., to completely rehabilitate the properties and facilities of the California company, Mr. Sinclair said. He pointed out that for almost two years Richfield has been running on rapidly depreciating facilities and properties.

Mr. Sinclair entertained a bullish view on the oil industry as a whole and a hope of better gasoline prices, pointing out that a cent increase in the retail price would net the company $10,000,000 in its earnings per year.

Persistent but unverified reports were in circulation that both Shell Union and Cities Service Co. contemplate outbidding the Consolidated Oil Co. $22,250,000 offer for the assets of the Richfield Oil Co. Although the joint reorganization committee representing Richfield creditors formally accepted the Consolidated's offer, the committee reserved the right to consider other bids submitted within the next 45 days.

Rio Grande Proposal

Directors of the Consolidated Oil Corp. have tendered an offer to stockholders of the Rio Grande Oil Co. to purchase the total assets and assume all liabilities of the Rio Grande on the basis of an exchange of stock, Charles S. Jones, vice president and treasurer of the latter concern, announced.

The proposal entails an offer of 2 shares of Consolidated for 5 shares of Rio Grande, or an exchange basis of 1 Consolidated for 2½ Rio Grande shares.

Coincident with the announcement, directors of Rio Grande Oil Co. voted to accept the offer of exchange of stock by Consolidated. Stockholders of Rio Grande Oil Co. will meet September 14 to vote on acceptance of the Consolidated offer.

On the basis of the 1,216,700 shares of Rio Grande Oil capital stock now outstanding, the acquisition would require 486,680 Consolidated shares. Rio Grande has no funded debt and for the first quarter this year earned approximately 7 cents a share before Federal taxes.

Richfield Oil Co.

Richfield Oil Co. of California has ranked among the most aggressive independents of the country and has rapidly pushed forward its development. Incorporated August 2, 1926, in Delaware, Richfield was an outgrowth of the United Oil Co., which in turn owned all of the stock of the original Richfield Oil Co. which had been incorporated in California in 1911. Richfield Oil Co. of California, which grew out of United, acquired the entire capital stocks of the Pacific National Gasoline Co., Southwestern Petroleum Co. and Henderson Petroleum Corp., and 50 per cent of the stock of the McKeon Oil Co. (the other half already being owned by United Oil Co.). The new Richfield company also acquired a substantial interest in the properties of the J. W. Jameson Corp. and the entire capital stock of Signal Hill Gasoline Co. The assets and liabilities of the first four named companies were later taken over and the companies dissolved.

In June, 1928, Richfield purchased the entire Class "A" (voting) stock and 50,000 of the 400,000 Class "B" nonvoting shares of Pan American Western Petroleum Co., a holding company owning all the stock of Pan American Petroleum Co., which in turn owned all of the capital stock of the Los Angeles Midway Pipe Line. When Pan American Western Petroleum Co. was dissolved, operations of Pan American Petroleum Co. and Los Angeles Midway Pipe Line Co. were consolidated under the management of Richfield Oil Co. of California.

In the Eastern Field

The most important phase of Richfield's recent expansion program, however, was the formation early in 1929 of Richfield Oil Corp. of New York, organized as an eastern marketing subsidiary of the parent company. The nucleus of Richfield of New York was Acewood Petroleum Corp. and the Walburn Petroleum Co., both of which were acquired by Richfield. The management of Richfield of New York was placed in the hands of officials of both the Acewood and Walburn companies. Richfield of New York immediately embarked upon a development program and purchased a large number of bulk properties and marketing chains.

Completely Integrated Unit

Richfield Oil Co. of California and its subsidiaries form a completely integrated unit in the oil industry, being engaged in producing, transporting, refining and marketing. The company's properties as of January 1, 1930, included close to 100,000 acres in California oil fields, on which there were 598 producing wells; five refineries with aggregate daily capacity of 159,000 bbls.; a pipe line system consisting of 509 miles of lines; storage capacity at terminals totaling approximately 2,200,000 bbls.; 12 casinghead gasoline plants with daily capacity of 168,000 gallons; nine steam tankers, one motorship tanker, and four barges, with aggregate capacity of 700,000 bbls.; marine terminals, bulk distributing plants, tank cars, and other marketing properties.

Gross production of crude oil by Richfield Oil Co. of California and its subsidiaries in 1929 (excluding Universal Consolidated Oil Corp.) was 13,395,400 bbls., as compared with 10,230,400 bbls. in the preceding year and 5,936,900 bbls. in 1927.

Gasoline sales by Richfield for 1929 totaled 502,660,000 gallons, as contrasted with 276,306,000 gallons in 1928 and 158,449,000 gallons in 1927.

Rio Grande Oil Co.

Rio Grande Oil Co., the holding company, was organized in Delaware in November, 1925, and through its chief subsidiary, the Rio Grande Oil Co. of Texas, controls a completely integrated producing, refining and marketing unit. At last reports, the company, through its subsidiaries, owned leases on approximately 53,000 acres in California, Texas and New Mexico, most of which is undeveloped. The company has considerable proven acreage in Texas and California, notably the Elwood Terrace Field in the latter State. The company owns in California a 57-mile pipe line with daily capacity for 20,000 bbls., in addition to tank car and tank truck equipment for transporting oil. Rio Grande owns three refineries and two casinghead gasoline plants and a half interest in another.

The company markets "Speedine" and "Rio Grande" gasoline and oils, and at last reports operated 26 bulk stations, serving 3,500 dealers and 49 retail stations located in California, Arizona, New Mexico and Texas. All gasoline not so distributed is disposed of under contract expiring in July, 1931.

The entire capital stock of Lockhart & Co., Reservoir Hill Gasoline Co., Refineria Petrolera Occidental S. A., and Pacific Marine Oil Co., is owned by Rio Grande Oil Co. of Texas.

Rio Grande refineries are located at Vinvale, Calif.; Phoenix, Ariz.; El Paso and Sour Lake, Tex. Storage facilities for close to 1,700,000 bbls. of crude and refined petroleum are owned by the company, which has a harbor shipping plant at Elwood, Calif., where a field gathering system, approximately 400,000 bbls. of steel storage, and a marine loading line, extending 3,500 feet into the ocean, with all equipment for tanker loading, is held.

The Rio Grande expended $2,000,000 in construction of an oil terminal at Long Beach harbor and a triple pipe line from there to the company's refinery at Vinvale, where the company installed a cracking plant.

The company entered the export market in a large way for the first time during 1929 upon the opening of its new export terminal at Long Beach. According to J. J. Downey, general superintendent, the company's export sales would average 300,000 cases of refined products per month and other export shipments totaling 1,500,000 bbls. per month.

Constructing New Section of Pipe Line to Refinery

Making bends on and welding the six-inch pipe line being constructed by the Illinois Pipe Line Co. from the Marathon Oil Co's. refinery northeast of Fort Worth, Texas, around the city to connect with the main line from the Ranger District, a distance of seven miles. The old pipe line will be taken up when this new section is completed

Wilbur T. Funk Retires as Vice President of Carter

W. T. Funk, who for 38 years has been connected with the Standard Oil Co. of New Jersey and its affiliated interests, has retired as a vice president of the Carter Oil Co. Mr. Funk will continue to reside in Tulsa.

Texas Railroad Commission Has the Authority to Prevent Imminent Waste of Oil or Gas

By L. G. E. BIGNELL
Petroleum Engineering Editor

Many comments have been received upon the suggestion offered in The Oil and Gas Journal of July 28 that the rate of production in the East Texas oil field be limited to the rate of water movement through the reservoir. Some have suggested that the principle should be applied to all oil pools because by so doing the energy stored in the water adjacent to the oil would then be utilized and a better flushing of the sand be accomplished.

No one thus far has challenged the fundamental principles underlying the suggested method of regulating rate of production in East Texas because it seems to be the concensus of opinion of those familiar with this area that the energy to be derived from the head of water lying under and to the west of the producing horizon is the principal natural agency that will tend to maintain reservoir pressures if the rate of withdrawal of oil and gas is at the same rate as the movement of water into the pore spaces in the sand left open as the hydrocarbons are withdrawn.

Some have asked about a practical application of the theory to the East Texas Field at this rather late date in the period of development. To those questions there seems to be but one answer, and that is that the best available engineering practice and production methods should be applied to the field at as early a date as possible, and while it is admitted that this method of production cannot now be as effective as it would have been if applied to the field earlier in its life, still this is no argument against its application as soon as possible and in this way gain as much advantage as can still be had by the proper use of this natural flushing medium.

Law Covers Application of Plan

In Section 7 of the New Texas Conservation Bill (House Bill 25), passed August 12, 1931, it states:

"The commission shall have the right when it reasonably appears, and shall upon the verified complaint of any party showing that physical waste of crude petroleum oil or natural gas is taking place in this state, **or is reasonably imminent,** to hold such hearings at such times and places as it may fix, to determine whether or not such waste is taking place **or is reasonably imminent,** and to make inquiry into what rule, if any, or what regulation or order should be made and what action, if any, should be taken to correct, prevent, or lessen the same within the meaning of this act. Notice of such hearings shall be given as provided by law. All parties interested shall be entitled to be heard and introduce evidence and shall have the right to process for witnesses and the production of evidence. The commission upon such hearing, if it finds that waste is taking place **or is reasonably imminent,** shall make and enter such rule, regulation or order as in its judgment the facts justify, in order to correct, prevent or lessen such waste, if any. If it is the judgment of the commission that any reduction or adjustment in order to prevent the waste as herein defined of crude petroleum oil or natural gas from any such well or pool, the commission shall determine how to accomplish such reduction or adjustment and such order shall be made in such manner as to distribute, prorate or otherwise apportion such reduction or adjustment among the wells committing such waste or contributing thereto as the facts justify and equitably require. Any properties, well or pools within this state may be described or referred to by the commission in such proceedings and in making of such rules, regulations or orders, in general terms or by using well understood names or descriptions thereof, or may otherwise identify the same by general or special description."

In as much as this section of the act specifically states "physical waste of crude petroleum oil or natural gas is taking place in this state, **or is reasonably imminent,**" it is within the power of the commission to give consideration to the facts as now known to exist in East Texas with the intention of preventing future underground waste of crude petroleum oil or natural gas which can reasonably be expected to occur if the present methods of production in the East Texas Field are continued and advantage is not taken of the natural water drive that can be applied to this field.

Fundamental Principles

To establish the fact that a greater amount of oil can be secured from the reservoir of the East Texas oil field by the utilization of the natural water drive available to this pool it may be well to recite some of the basic principles governing oil fields in general and East Texas in particular. These facts are statements of the relative functions of oil, gas and water in natural reservoirs and are in strict accord with the laws of physics and cannot be denied. They have been sufficiently demonstrated in laboratory experiments and in practical field operation to be recognized as facts.

In every oil field, with but few exceptions, there occurs adjacent to the body of oil and gas accumulated in the reservoir, a body of water, in most instances salty in character but in others containing sulphur and other elements in solution. As the oil and gas is removed from these porous natural reservoirs the water will fill the pore spaces left vacant.

The influx of water is occasioned by the fact that it is under a hydrostatic pressure created by the higher elevation of the source of the water at the place where it enters the formation. This difference in elevation is commonly referred to as the "head" and water will exert a pressure of about .43 pounds per square inch for each foot of height of the water column. This factor is for fresh water and salt water being slightly heavier will create a slightly greater pressure. This pressure is exerted in every direction from any point where it may be measured.

Oil and gas reservoirs are usually composed of sandstones or porous limestone, but other types of both sedimentary and igneous rocks have been known to contain hydrocarbons. As the fluids percolate through the reservoir because of differences in pressure ,gravity separation of the oil and gas from the water takes place; the former fluids finding their way to the top of the reservoir and the heavier water remaining at the bottom.

When there occurs any condition within the reservoir to halt this slow movement, the oil and gas, being driven forward by the pressure from behind and being unable to move because of an obstruction in front, becomes trapped above the water. In this way oil pools are formed. Oil contained within the emulsion which has not yet separated out will find its way to the oil and or gas area at the surface of the water. The water will continue to move forward under pressure until the resisting pressure of the trapped oil and gas becomes equal to that forcing the water forward. At this point of "static equilibrium" all movement stops, and both fluids remain stationary until some condition occurs which changes the pressure of one or the other. When such a condition occurs movement is resumed until a condition of equilibrium is again reached.

The Oil and Gas Reservoir

The term "reservoir" as used in the following definitions means any porous medium, of whatever thickness and extent, which is capable of containing and permitting passage of fluids. In its more restricted application it refers to only that portion of the sand or lime which actually contains the segregated oil and gas. This distinction would exclude from the meaning of the term any impervious masses of shales or other materials which could not contain oil or gas and confine the "reservoir" to the porous portion of the formation only. The contact of the oil and water marks the edge of the reservoir as given in the latter sense.

"Reservoir pressure" is the pressure of the oil and gas in the formation. The maximum reservoir pressure or "virgin pressure" is the initial amount before any reduction occurs through extraction of oil and/or gas. It is the "sealed-in" pressure existing in the reservoir when it was in its natural state, before man discovered it.

"Bottom-hole pressure" is that pressure actually measured at the bottom of the drilled hole, as distinguished from "tubing-head" or "casing-head" pressures read at the surface of the ground. When the bottom of the drill hole is in the reservoir the pressure recorded there should be the reservoir pressure at that point, or within that particular area influencing the particular well being measured.

"Reservoir energy" is the capacity for work of the fluid and gas under pressure. This force is utilized in moving the fluid through the sand to the drilled hole. Since the reservoir energy is contained mostly in the included and dissolved gas under pressure, and since fluid pressures may be transmitted from point to point without actual physical movement of that fluid, reservoir pressure and therefore reservoir energy in any part of the reservoir may be reduced or dissipated without actual withdrawal of fluid or gas therefrom.

"Gas-oil ratio" is the relation between the amounts of gas and oil produced, and is expressed in terms of cubic feet of gas per barrel of oil. Since the oil is transported through the sand by movement of gas, and since the pressure of the gas and hence its energy is reduced by reduction in volume, the most efficient gas-oil ratio is that obtained when the smallest amount of gas per barrel of oil is produced.

"Porosity" of a sand is the amount of open spaces between the grains in which fluids are contained. It various with size and shape of grains.

"Permeability" of a sand is the capacity of that sand for permitting the passage of fluids. It depends also upon size and shape of grains, as they affect the shape of the passage through which the fluids move.

Conditions Within Reservoir

If the oil, gas and water were contained within the reservoir as in an open pool, so that there could and would be instantaneous adjustment of pressure in the vapors, and free and unhampered movement of the liquids, there would be no need for restraint of any of the forces because of slow readjustment of the others.

Conditions are not ideal when the oil, gas and water are soaked into a rock and neither the application nor operation of any of the forces is free and unhampered.

Good engineering practice recognizes these principles, and all engineers are striving to measure these forces and adjust the inequalities of their application which are inherent in reservoirs of different characteristics.

The ideal method of operating any oil field would be, of course, to withdraw the oil only as rapidly as the water could take its place. If an equal volume of water could be substituted for the volume of oil and gas withdrawn, pressures would remain constant, and the maximum efficiency of the reservoir energy could then be obtained. Also, if water were permitted to enter only as fast as it could wash the oil through the sand before it, the maximum quan-

tity of total oil content of the sand would be recovered.

Application to East Texas

The above facts have already been established in hearings before the Texas Railroad Commission and are generally agreed to by engineers and it therefore remains to apply them to the particular problems of the East Texas Field.

To prevent physical waste in the East Texas Field, whether actually or imminent, is the duty of the commission, and it may be stated that physical waste of crude petroleum oil and natural gas can be divided into four classes as follows:

1. Unregulated, even if not unrestrained, flow has permitted unequal reduction in reservoir pressure.

2. Unequal reductions in pressure cause irregular advance of water, which tends eventually to isolate throughout the sand patches of oil which are not recovered.

3. Waste of gas from the reservoir through production at inefficient oil-gas ratios.

4. Waste of gas through being dissipated into the air.

The particular problem now under consideration is the regulation of present-day withdrawals to conform as nearly as possible to the rate of water movement in the reservoir.

It is generally agreed that the East Texas oil field resulted because of the accumulation of oil and gas generated in source beds located under and to the west of the present area. These elements were forced into the pore spaces within the sandy portion of the formation by water pressure exerted from the west or down dip portion of the Woodbine formation. The accumulation was slow and many conditions difficult to explain fully occurred during this geological period during which the sand pores were being charged with oil and gas.

As discovered the oil and gas was under a reservoir pressure of about 1,650 pounds per square inch. This pressure corresponds closely to the pressure exerted by a column of water 3,840 feet high and correlates with the difference in elevation between the outcrop of the Woodbine sands near Fort Worth, Tex., and their point of contact between water and oil in the East Texas Field.

This hydrostatic pressure is further confirmed by actual bottom-hole measurements made in wells containing salt water as shown by the following table:

Well and survey—	Bottom-hole pressure (lbs., sq. in.)
Sun Oil Co.'s No. 1 Schuler, J. B. Cadena Sur.	1,605
Sun Oil Co.'s No. 1-A Rich, J. Vargas Sur.	1,613
Sinclair O. & G. Co.'s No. 1 Cole, Sam Brooks Sur.	1,599
Sinclair O. & G. Co.'s No. 4 Cole, Sam Brooks Sur.	1,605

These actual bottom-hole pressure readings, secured last year, are all within about 50 pounds of the estimated hydrostatic pressure of the water at the west and underneath a portion of the field. This is about a 3 per cent drop within the oil-producing portion of the sand and the drop may be accounted for by energy used in the equalization of pressures caused by withdrawal of oil and gas from the entire reservoir.

Other bottom-hole pressures within the field vary from as low as 700 pounds per square inch to 1,500 pounds or slightly more and indicate pressure drops due to removal of oil and gas from the sand spaces at greater rates than repressuring has occurred due to movement of water through the sands. Average pressure for field is now about 1,400 pounds per square inch.

As the field was charged with oil and gas from the water movement from the west it has been shown by carefully drawn cross sections of the north, central and southern portions of the field that the line of water and oil contact exists beneath the producing portions of the field. These areas of contact are about 20,000 feet for the Lathrop or north portion, 10,000 feet for the Kilgore or central portion and 19,000 feet for the southern or Joiner portion of the field. The original water level in the field has been placed at about —3,320 feet below sealevel datum.

It has been estimated that this water level will move upward at the rate of about 1 foot for every 20,000,000 bbls. of oil withdrawn from the reservoir and with about 175,000,000 bbls. of oil produced to date should now be at about —3,311.25 feet below sealevel. The present water level has not been established by observed measurements because of the fact that orders issued by the Railroad Commission last fall prohibited the drilling of wells deeper than a point 20 feet above the —3,320-foot datum line. Most holes were completed well above that level and water has not shown up in them to date because the amount of oil withdrawn has not been sufficient to permit the water to move up into the sands enough to reach the bottom of the drilled holes.

Bottom-Hole Pressures Decline

The fact that bottom-hole pressures have declined in all parts of the field except in those areas in which water is now being produced from the wells indicates quite clearly that the rate of production of oil and gas has been greater than the rate of travel of the water.

It is to regulate withdrawal rate of oil and gas to the rate of water movement through the sand that the suggestions are made that the Railroad Commission appoint an engineering committee to assemble data from which rules can be issued. All parts of the field are not alike in either spacing of wells, or rate of production for the areas. Where wells are closely spaced it is known that the drainage per acre has been much higher than in areas where wells are spaced farther apart.

Areas of Greater Drainage

These local areas of greater drainage show lower bottom-hole pressures because a greater proportion of the gas energy contained within the local sand lenzes has been used. Time has not been sufficient to permit water to move up to these local sand lenzes and repressures them by a water drive. If they are produced at the present rate of 44 bbls. per well per day it is only reasonable to assume that greater bottom-hole pressure drops will occur and in time the wells will cease to flow by natural forces.

From a study of pressure contour maps of the East Texas Field taken during various intervals since July, 1931, it has been shown that areas of different pressures exist in zones that extend throughout the full length of the field from north to south and vary in amount from west to east. The higher pressure zones are to the west while the lowest pressure zones are at the extreme eastern edge of the field, particularly in the Joiner area where the oldest wells are located.

Because of the fact that the gas is wholly contained within the oil and none of it exists in a free state at the present bottom-hole pressures, it is safe to assume that oil and gas as a body will move from areas of high to areas of low pressure. Therefore areas in which wells are closely spaced, even though they have been produced at the same daily rate as wells in other areas of wider spacing, will tend to drain oil from adjacent higher pressure areas. Later such areas may be subject to repressuring and perhaps flooding by water if the differentials in pressure between the low pressure zones and the underlying water exceed the amount needed to hold water movement in check.

There are no criteria available that will permit engineers to state definitely the amount of energy required to move water through sand bodies at any given rate. Therefore it is difficult to anticipate when water may break through into depleted low pressure zones in the East Texas Field and flood them, but from experiences in other fields it seems safe to assume that such a condition is possible if control of bottom-hole pressure in all parts of the field is not maintained.

Experiences in Oklahoma City Field with production from the lower Simpson sand will tend to confirm this theory of free movement of water through a porous media when the differentials in pressures in adjacent areas decline below the amount needed to hold the water in control. The lower Simpson is a truncated sand with water downdip and therefore resembles conditions in East Texas closely in this detail. Oil and gas, especially gas, was withdrawn from the lower Simpson sand in large quantities and underground pressures reduced to a point where water broke through into one well in the north portion of the field and from that point moved through the sand in every direction.

In the East Texas oil field there is a noticeable decline in initial reservoir pressure and it is now quite common practice to bring the wells in by the use of compressed air pumped into the hole under relatively high pressures. This injection of air lightens the fluid column in the well to the point where the existing reservoir pressure is able to continue the work of producing the oil. This practice was not necessary during the early development of the field and because it must be resorted to at this time indicates quite clearly that natural energy within the reservoir has been dissipated and artificial means must be resorted to in order that the well may be made to flow.

This same practice of injecting air is being followed in many wells that have gone dead after producing only a limited amount of oil and gas. It is simpler than swabbing them back on production, but if the swab is used it is for the same purpose as air injection, that is, it lightens the fluid column to the point where the natural reservoir energy can again take up the work of flowing the oil to the surface.

As more wells are completed it will be found that a greater proportion of the natural energy of the reservoir will be dissipated and if the average bottom-hole pressure of the field is now about 1,400 pounds it indicates that there has been a drop of about 250 pounds during the production of 175,000,000 bbls. of oil. This equals a drop of about 1.428 pounds per million barrels of oil produced. At this rate of pressure drop only about 385,000,000 bbls. of additional oil can be produced by natural flow if the bottom-hole pressure of 850 pounds per square inch is required to flow East Texas wells. This is estimated by the simple equation:

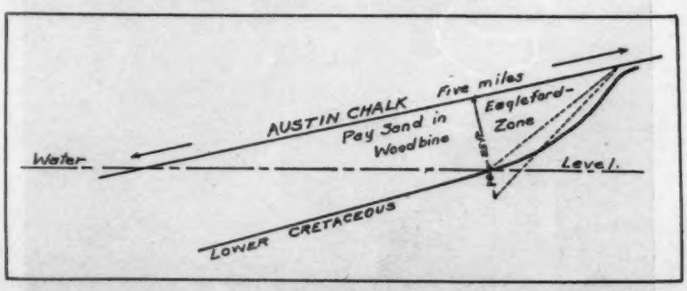
$$250 : 175 :: 550 : x.$$

It is granted that this simple method of estimating future production by natural flow may not hold in all cases, yet for general conditions it will be found to be more or less true. How much oil can later be recovered by pumping would depend upon how much energy is left in the sands to force the oil to the wells and as this future oil will of necessity lie at points farthest from the hole it will take more energy to move it to the bottom of the well than it has required to move the oil thus far recovered.

If the water known to exist beneath a portion of this field is utilized and so controlled that it will move upward and toward the east at a uniform rate the sands will be repressured by this energy. Oil will be washed out ahead of this natural water flood and as the water is at a temperature of about 140° F. it should quite thoroughly wash the pore spaces of their oil and move it to the well for recovery.

If this regulation of water movement is neglected oil will be entrapped in the sands and its future recovery is then a very doubtful matter. Such loss of oil will constitute underground waste and within the scope of the Conservation Act of Texas comes under the jurisdiction of the Railroad Commission as "imminent waste."

While the subject may be controversial as to many of its aspects, the fundamental fact remains that this East Texas Field is peculiar in that it has adjacent to its oil and gas hot water under sufficient hydrostatic head to serve as a flushing medium for the recovery of this oil; and if this natural energy is not conserved, future underground waste is imminent, and it is the duty of the Railroad Commission to prevent this or reduce it as much as possible. Engineering and production data are available to solve this problem, but it must be applied; and to this end it is urged that the Railroad Commission appoint a competent engineering committee for East Texas at once, so that it may begin its duties before conditions in that field become any worse.



Idealized cross-section of the East Texas Field showing relative position of water level where it is in contact with oil producing section of Woodbine sand. From article by O. L. Brace, The Oil and Gas Journal, Feb. 18, 1932

Survey Gives Data on Gasoline Storage Losses in Several Tanks Over Yearly Periods

By L. C. HAMLIN
Research Engineer, Chicago Bridge & Iron Works

During the past year the Chicago Bridge & Iron Works, through the co-operation of 12 oil companies, has conducted a survey of motor gasoline evaporation losses during storage in large tanks at various localities of the north central and northeastern districts of the United States.

The vapor pressure method of determining losses was used for all tests. The laboratory apparatus and procedure for this method were developed by the Standard Oil Co. of Indiana[1] and its application to the determination of evaporation losses was described by the originators at the 1930 annual meeting of the American Petroleum Institute.

Description of Method

In brief, the vapor pressure method of determining evaporation losses is based upon the decrease in vapor pressure which results when gasoline evaporates. A test is conducted by examining samples taken from the body of gasoline being tested at the beginning and end of the test period.

By means of the special apparatus, to which the method owes its accuracy and convenience, the vapor pressure of the initial sample is determined after each of numerous known small percentages have been evaporated in the laboratory. A similar examination is made of the final sample. A comparison of the results of the two tests shows the percentage of evaporation which the original gasoline must have undergone to give it the vapor pressure shown by the final sample.

All laboratory determinations of vapor pressure were made at 75° F. Wherever it was desirable to record the vapor pressures as of the more commonly used temperature of 100° F. this change was made by means of vapor pressure-temperature graphs.

Taking Samples

Samples for evaporation tests on gasoline storage are taken at middepth in the liquid. This point in the liquid body was arbitrarily recommended after original investigations had shown the vapor pressure of gasoline in storage to be practically constant throughout the liquid depth. Detailed precautions are used in the method of taking and handling the samples in order to obtain a representative sample and to preserve its characteristics.

Accuracy of Method

Measurement of evaporation loss by the vapor pressure method possesses the advantage of establishing directly the amount of loss through analysis of the product under test. Factors such as changes in liquid temperature, tank leakage and removals of stock during the test period, which control the accuracy of tests made by direct measurement of liquid volume, do not affect the accuracy of the vapor pressure method.

Tests reported by the originators as checking the accuracy of the vapor pressure method included:

1. Comparison of the results of evaporation tests on four 80,000-bbl. tanks with welded seams as determined by field gauges and by the vapor pressure method. The mean difference in the test results by the two methods was 0.04 per cent.

2. Comparison of the results of tests on the evaporation losses from small containers as determined by weight and by the vapor pressure method. The mean difference in the results of six such tests was 0.04 per cent.

Independent tests were made to verify the degree of accuracy thus reported by the originators. Four tests were made comparing the losses from small containers as determined by weight and by the vapor pressure method. In these tests the method of evaporation of the gasoline in the container was varied as follows:

1. Rapid evaporation through placing the open container in a forced draft.

2. Very slow evaporation through restricting the size of opening of the container.

3. Evaporation as brought about by pouring from one container to another.

The mean difference in the loss for these tests as determined by the two methods was 0.05 per cent.

Numerous tests were also made to check the absence of loss from properly sealed samples during transportation to a central laboratory. None of these tests showed a measurable loss.

Laboratory Work

All laboratory determinations for the tests were performed by the Miner Laboratories, industrial chemists in Chicago.

This report consists of 24 tests in which the similarity of storage conditions facilitates the comparison of the test results.

Types of Storage

All storage consisted of steel tanks, 5,000 bbls. or larger in capacity, and equipped with either steel cone or floating roofs. The floating roofs were either of the Wiggins pan type or of the newer Wiggins pontoon design. All tanks except two were painted light in color.

Insufficient comparative data were obtained to allow a conclusion as to the savings effected through the use of low pressure protective vents on cone roof tanks. The absence or presence of protective vents was, however, noted on the tank data.

Liquid Depth in Tanks

The depth of gasoline in the test tanks varied from full to one-third full. Wherever stock was removed from a tank during the test period, the percentage of loss, as obtained from the vapor pressure test, was applied against the average volume in the tank during the test period.

Duration and Time of Test

The length of the test periods varied from three weeks to four months. The average length of test period was six weeks.

All tests were arbitrarily classified as "summer" or "winter" tests according to the mean atmospheric temperature at the particular locality during the test period. Periods in which the mean atmospheric temperature was greater than 55° F. were classified as summer tests, while those having a mean temperature of 55° F., or less, were called winter tests. Daily temperatures for the test periods were obtained from the local weather bureaus.

Quality of Gasoline

All gasolines stored in the test tanks were of the "regular" or "competitive price" type. The volatility of the gasolines was, in general, suitable for use in motors during the season of the test period. The average vapor pressure (100° F.) of the summer gasolines was 9.7 pounds per square inch, and of the winter gasolines 11.3 pounds per square inch.

Results of Tests

Test data and test results are given in Table 1. Rates of evaporation loss are reduced to gallons per year and also to the basis of gallons per square foot of tank

(Continued on Page 30)

TABLE 1—EVAPORATION TESTS ON LARGE CONE AND FLOATING ROOF GASOLINE STORAGE TANKS

Cone Roof Storage

Test No.	Season	Location	Size of tank	Capacity of tank (bbls.)	Protective vents	Average depth in tank during test period	Av. vapor pressure of gasoline during test period, lbs. per sq. in. at 100° F.	Rate of evaporation: Gals. per year	Rate of evaporation: Gals. per sq. ft. of tank area per year
1	Summer	Rhode Island	100'ϕx35'	49,000	Yes	34'	13.0	102,500	13.0
2	Summer	Rhode Island	100'ϕx35'	49,000	No	25'	8.9	109,500	13.9
3	Summer	Rhode Island	100'ϕx35'	49,000	Yes	13'	8.9	112,000	14.3
4	Summer	New York	50'ϕx30'	10,000	No	31'	8.8	27,200	13.9
5	Summer	New York	125'ϕx45'	100,000	Yes	28'	9.3	126,000	10.3
	Average for summer tests								13.1
1	Winter	Maine	100'ϕx40'	56,000	Yes	19'	9.1	97,000	12.3
2	Winter	New York	125'ϕx45'	100,000	Yes	28'	9.8	108,000	8.8
3	Winter	Rhode Island	100'ϕx35'	49,000	Yes	22'	12.8	57,100	7.3
4	Winter	Ohio	78'ϕx46'	40,000	Yes	30'	11.2	34,900	7.3
5	Winter	Ohio	78'ϕx46'	40,000	Yes	29'	13.3	69,200	14.4
	Average for winter tests								10.0
	Average for year								11.6

Floating Roof Storage

Test No.	Season	Location	Size of tank	Capacity of tank (bbls.)	Type of roof	Average depth in tank during test period	Av. vapor pressure of gasoline during test period, lbs./sq. in. at 100° F.	Rate of evaporation: Gals. per year	Rate of evaporation: Gals. per sq. ft. of tank area per year
1	Summer	Illinois	60ϕ'x30'	15,000	Pan	24'	10.3	9,300	3.3
2	Summer	New York	30ϕ'x40'	5,000	Pontoon	32'	9.5	2,850	4.0
3	Summer	New York	70'ϕx20'	20,000	Pan	31'	9.2	12,300	3.2
4	Summer	New Jersey	114'ϕx30'	55,000	Pontoon	19'	11.5	16,400	1.6
5	Summer	New Jersey	114'ϕx30'	55,000	Pontoon	26'	11.1	43,100	4.2
6	Summer	New Jersey	117'ϕx42'	80,000	Pontoon	30'	10.8	27,500	2.6
7	Summer	Maine	95'ϕx30'	37,500	Pontoon	9'	11.3	7,450	1.1
8	Summer	New Jersey	117'ϕx42'	80,000	Pan	21'	5.7	25,100	2.4
9	Summer	New Jersey	117'ϕx42'	80,000	Pontoon	36'	6.6	25,300	2.3
	Average for summer tests								2.7
1	Winter	New Jersey	117ϕ'x42'	80,000	Pontoon	33'	11.6	19,000	1.8
2	Winter	Illinois	117'ϕx42'	80,000	Pan	40'	11.4	19,700	1.8
3	Winter	Illinois	117ϕ'x42'	80,000	Pan	39'	10.9	14,150	1.3
4	Winter	Rhode Island	100ϕ'x35'	49,000	Pontoon	22'	11.6	18,100	2.3
5	Winter	Maine	95ϕ'x30'	37,500	Pontoon	19'	11.7	5,900	0.8
	Average for winter tests								1.6
	Average for year								2.2

Apparatus for measuring evaporation loss by the Vapor Pressure method

[1] Anal. Ed., Ind. and Eng. Chem., Vol. 2, 1930, and The Oil and Gas Journal, November 13, 1930, Page 78.

Warren Petroleum Co. Adopted Good Business Formula and Then Put It Into Operation

By THOMAS F. SMILEY

The formula that turns out especially well—whether it be for salad dressing, rat poison, dandruff cure, dressing a drilling bit or for the organization of a fishing club—usually owes its success to some particular component or to some peculiar cleverness in handling materials.

"Oh, Mrs. Van Poppycock, you must tell me how you make this delicious angel food cake. The flavor is simply exquisite."

"It's the ground almonds, my dear. Just the ground almonds."

In the building of a business organisation certain time-tried ingredients must be included or the enterprise is likely to head for the rocks forthwith. There must be keenness of judgment, vision, faith, integrity, patience and other good old-fashioned attributes. Even then the project may slide into an early grave through lack of some one element that would have sent it forth jaunty and triumphant.

The ground almonds.

All of which is by way of trying to make it a little clearer why the Warren Petroleum Co., which this year is observing its tenth anniversary, has passed through the fires, floods, cyclones and grasshopper plagues of business life strong and smiling.

To begin with the company did not commit the blunder of scattering its efforts. It focused its energies upon one thing, to-wit, natural gasoline. And it steadfastly refused to be swerved from its charted course. It used to be a common thing for some client to say, "I'd like to have a quotation on kerosene."

"Can't give you one, old man," would be the response. "We don't handle anything but natural gasoline."

"Oh, I see. Just natural gasoline."

Origin of Slogan

And out of this oft-repeated dialogue came the company's slogan, familiar throughout the oil industry, "Just natural gasoline."

Unquestionably this concentration was an immensely important factor in the growth of the Warren Petroleum Co. There would be strong reasons for naming it as the key to the company's success.

P. S. But it wasn't the only thing.

The company started life in two small rooms in the Atco Building, Tulsa, but at first it had so little to do and so much room in which to do it that it fairly rattled around in the amplitude of the space available. Today it has a suite of seven rooms in the Exchange Tower, Tulsa. And needs them all.

When the company opened its doors—its door, to be more exact—for the transaction of business, if any, it had no clients and its prospective ones could be counted on the fingers of one hand and part of another. Today it does a business of $15,000,000 a year. In conducting it the company operates 539 tank cars, of which it owns 189, leasing the rest. There's growth for you.

The Warren Petroleum Co. is owned by W. K. Warren, president; J. A. LaFortune, vice president, and Howard E. Felt, secretary. Mr. Warren holds a controlling interest. All three men are unconscionably young. Arthur J. Murphy is treasurer.

Mr. Warren, born in Nashville, Tenn., in 1897, passed his boyhood in that city. Of course, like most up-and-going youngsters, he had a newspaper route in his kid days, but his first real job was with the Gypsy Oil Co. in Tulsa. No deep, impelling purpose guided him in the selection of this particular spot for the exercise of his talents. He wanted a job, any kind, anywhere. This one came along and he grabbed it.

Just a minute though. It may be worth while to explain how the first job of a boy living in Nashville, Tenn., happened to be over in Oklahoma. The incident throws light on a phase of character that may have had much to do with fortunate turns in later business life—turns which uninformed observers might attribute to mere luck.

St. Thomas' Hospital was on young Bill Warren's morning newspaper route in Nashville. Patients among his customers often asked him to perform minor errands. "Sure," he always responded. One of these patients happened to be the wife of a well-known oil man in Sapulpa, Okla. From time to time Bill took care

W. K. WARREN
President

of little commissions for her, such as buying small articles in the downtown stores. The smile and the willingness with which these commissions were executed won the woman's friendly regard, so that when she left the hospital she said, "Bill, if you have trouble finding a job when you get through school, let me know. I'll get one for you."

So it came about that when Bill finished school he wrote a letter the substance of which was, "I'm ready for the job." Back came the reply, "The job's ready for you." And a few days later Bill, now 18, was working as a voucher clerk for the Gypsy.

After a year and a half with the Gypsy the boy went to work in the office of the Margay Oil Corp. Then in 1919 he joined the Gilliland Oil Co., which put him in its Shreveport, La., office, in charge of records covering pipe lines, production of oil and natural gasoline. Later he was transferred to the company's Tulsa office, where he took care of similar records and served as assistant to Patrick J. Hurley, vice president of Gilliland and now Secretary of War.

In 1921 Gilliland sold its Burkburnett properties in Texas to the McMan Oil & Gas Co. Young Warren went over to McMan as a part of this transaction.

Lack of System Seen

By this time the present head of the Warren Petroleum Co. found himself in the grip of a growing desire to have a business of his own. Even while he was with the Gypsy he had acquired an interest in a small natural gasoline plant near Drumright, Okla. He made a thoughtful study of the natural gasoline situation as it existed at that time. He noted the utter absence of system in the buying and selling of this commodity which had come to fill so important a place in the making of motor fuels. He believed he saw opportunity spelled in large letters. His financial resources totaled about $300. Should he make the plunge?

Mr. Warren never was one to dally unnecessarily long over any question, whether it concerned making a plunge or buying a necktie.

On March 15, 1922, without pomp or circumstance, the Warren Petroleum Co., W. K. Warren, president, vice president, treasurer and sole owner, began business in its two rooms. Mr. Warren had married six months before this, and Mrs. Warren, bearing the dignified title of secretary, was installed in the "front office" to receive visitors, lend an impressive air to the scenery and take care of the clerical work which it was hoped

J. A. LaFORTUNE
Vice President

would develop. She knew how to appear busy and she kept important looking papers at her elbow. The back room was Mr. Warren's. There prospective clients were ushered for conference with the president, vice president, etc.

Mr. Warren had some definite ideas in setting out on this new undertaking. Among them were these: That his company ultimately should function as a sales representative for natural gasoline manufacturers who became clients; that its efforts should be centered on establishing long-time business relationships rather than on snapping up temporary profits; that no accounts should be sought with either sellers or buyers of dubious reputation; that the company never should resort to trickery or break faith; that, putting it another way, the company should command an A-1 rating and would do business with A-1 concerns and individuals only; that it should develop an organization which would afford both the manufacturer and the buyer of natural gasoline a medium through which the needs of each could be filled with certainty, promptness and economy; that it should introduce an orderly system of moving natural gasoline from the plant to the refiner to replace the haphazard methods then existing; that, last but highly important, it would handle "just natural gasoline."

But Even Fine Policies Won't Pay Bills

Excellent; sound to the core. But a set of policies, no matter how fine, cannot make up for the lack of cash when bills come due. From the start the Warren Petroleum Co., instead of acting as a broker, receiving commissions from seller and buyer, has bought natural gasoline at the market price and sold it at the market price, giving the manufacturer a year-round outlet and the refiner a year-round source of supply. As time passed the company realized its original objective of becoming in effect a sales representative for manufacturers. In the early days of the company, however, there were occasions when the sight draft of the manufacturer arrived before the check had come from the buyer. Once there was only $12,000 in the bank when a sight draft for $18,000 made its unexpected and unwelcome appearance. Mr. Warren had more than one anxious hour in a situation of this sort, but he always managed to hurdle the difficulty with the help of friendly banking interests.

The business had been running for only a month and already was showing signs of healthy growth when Mr. Warren took in Charles E. Brown as an equal partner. Mr. Brown, having had both field and sales experience in natural gasoline,

HOWARD E. FELT
Secretary

added marked strength to the young enterprise. He had been head of the natural gasoline department of the Twin State Oil Co.

Mr. LaFortune Enters

In 1924 J. A. LaFortune entered the company. Mr. LaFortune's early years had been spent in South Bend, Ind., where his first job was in the offices of the Standard Oil Co. of Indiana. Before this he had worked his way through a special course at Notre Dame University. With the entrance of the United States into the World War he enlisted in the naval aviation service and was stationed at Rockaway Beach, Long Island. Following the war he served as a physical director in the Red Cross, overseeing physical recreation for wounded soldiers first

(Continued on Page 30)

Rapid Development in Aviation Is Due Largely to Extensive Improvements in Gasoline

By C. K. FRANCIS, Ph.D.
Technical Editor

The airplane now provides the fastest means for transportation. The first contract of the Wright Brothers with the United States Government stipulated a maximum speed of 45 miles per hour, but within 20 years an airplane speed of 357 miles per hour had been attained and Hawks flew from the Atlantic to the Pacific Coast in less than 12 hours at an average speed of 210 miles per hour. During 1930 a total of 2,715,846 persons flew as passengers in civil aircraft, while nearly 4,000,000 went on chartered flights or short pleasure trips. Tulsa held the record as the busiest airport in the United States, handling 175,000 passengers without an accident. It was only two years ago that the total passenger traffic of 30 major lines of this country was 165,263 passengers. In 1931 airplanes flew in regularly scheduled service over 47,000,000 miles and transported 10,000,000 pounds of mail. This accomplishment is largely the result of a perfected fuel, one which is both powerful and safe.

Diligent attention has been given to the investigation of aircraft fuel, in fact, probably more research has been directed to it than any other grade of gasoline; consequently, it has steadily improved in quality. Without the careful study of the properties of gasoline and improvements in manufacture it would not have been possible for aviation to have made the great progress it has. The successful flights across continents and oceans would not have been accomplished if the ships had been fueled with the gasoline of war times.

The first means for classifying gasoline was based on its density, that is the gravity, and as the system which is used in the petroleum industry utilizes higher figures to denote the density of the lighter liquids than for the heavier ones, certain gasolines were known as high-test gasolines, and this term has remained with the industry to this day. We now appreciate that gravity alone is of little value, and that a high-test gasoline may be a poor product to use in an internal combustion motor.

Gravity, or weight, of the fuel to be used in an automobile is of little importance, but the weight of aircraft gasoline has considerable bearing upon power development and the cruising radius. The higher the gravity, the lower the weight per gallon but the heating value is greater per pound. For a given gallonage the lighter of two gasolines will produce more B.t.u. on a weight basis.

The quality of gasoline is determined by the results of several physical and chemical tests. Color and odor may be noted, but these are of minor importance. The percentage of sulphur must be very low, and in most aircraft gasolines it is below .05 per cent, because of its corrosive properties through the formation of sulphides and sulphuric acid. The most important test applied to gasoline has been the distillation test for determining volatility.

Volatile Properties

The volatile properties of a gasoline are determined by distilling 100 c.c. of the material in standardized apparatus under precise conditions. These properties are usually indicated by means of the initial boiling point; that is when the gasoline begins to form a vapor which will condense. The initial boiling point is that temperature at which the first drop falls from the end of the condenser tube. Then the temperature is noted as the fractions collect.

The initial boiling point and the 5 and 10 per cent temperatures are measures of the adaptability of the gasoline for easy starting of the engine. The higher percentages indicate the relative quantity of heavy hydrocarbons. These are especially important for a product that is to be used in automobiles because the products distilling at higher temperatures are not easily volatilized, and consequently leak into the crankcase and there dilute the lubricating oil. Dilution is not common in aircraft engines but the higher percentages of the distillation test, together with the endpoint influence performance and the formation of objectionable deposits.

The United States Fuel Administration, oil division, issued October, 1918, the report of committee on standardization of petroleum specifications, Bulletin No. 1. It contained specifications for aviation gasoline, export, fighting and domestic grades, and motor gasoline.

Great progress was made during the war in gathering information about the quality of the gasoline required for the efficient and safe operation of fighting planes. Improvement in the fuel was noted toward the end of the war. Since then particular research has been directed to aviation gasoline. The 1918 specifications were in the main confined to volatility. Color was loosely defined as water white, also corrosion and gum were not covered in the definite terms of today. Freedom from acid and all substances that may cause corrosion and seizing are now recognized as being of major importance. The necessity for good volatility, especially that shown by the 5 per cent point of the distillation test, caused overblending of natural gasoline. An effort was made to control this by means of the minimum and maximum stipulations at the 5 per cent point, or 140° and 158° F. respectively. Some light material is needed in any gasoline to assure easy starting, but when excessive quantities are present there is the danger of fire and vapor lock, either of which may be serious when the fuel is used in aircraft.

The current specifications for aviation gasoline by the Federal Specifications Board are:

AVIATION GASOLINE
Federal Specifications Board

Test—	Grade Domestic	Grade Fighting
Corrosion	Neg	Neg.
Gum	10 mgm.	10 mgm.
Sulphur, per cent	0.1	0.1
Distillation		
10%	158° F.	149° F.
50%	230°	212°
90%	330°	275°
Residue max., pct.	2	2
Vapor pressure at 100° F., max. lbs.	10	7
Freezing point	—76°F.	—76°F.
Acidity	None	None

Somewhat more rigid requirements are in force for aviation gasoline purchased by the individual Federal departments. An example is the specification of the U. S. Army:

AVIATION GASOLINE
U. S. Army, Fighting Grade

Knock rating	*87
Ethyl lead max. cc./gal.	6
Color	blue
Corrosion	neg.
Gum	10 mgm.
Sulphur, per cent	0.1
Distillation—	
10%	167°F.
50%	212°
90%	275°
Residue	2
Reid vapor pressure at 100° F. lbs /sq. in.	6.5
Freezing point	—76°F.
Acidity	None

*Octane number.

The recent specifications are of particular interest in that they reflect the importance of the developments made within the past few years through the study of the properties of gasoline. It seems that volatility as shown by the distillation test, cannot continue to hold the commanding position for judging the quality of gasoline that it has for many years. A remarkable advancement has been accomplished in the discovery of the influence of vapor pressure and knock rating.

Volatility, as measured by the distillation test, has much to do with easy starting of the motor and its satisfactory operation. The important points have been indicated in the specifications above outlined. The 10 per cent point should be reasonably low, so that enough gasoline will be vaporised to start the motor with a minimum number of revolutions of the starter. The 50 per cent point is soon reached as the temperature rises in the intake manifold, and it is of value as influencing acceleration and even performance. The 90 per cent point reflects the degree of fractionation obtained by the refiner. A high 90 per cent point means a poor fuel, containing heavy oily ends, which give low mileage because of loss of power, due to high temperatures required for the combustion. It was once thought that extreme volatility was desirable, but it is now known that a fuel vaporizing below the low limits set forth in the standard specifications will cause vapor or gas lock. This is the result of the gasoline boiling in the fuel system. The gas or vapor form a trap to stop the flow of the liquid. Gas lock causes irregular combustion, usually indicated by loss of power and in severe cases will stop the motor. This tendency is controlled by the vapor pressure of the fuel.

The perfection of analytical methods, based on fractionation at low temperatures, has shown the presence of the four low boiling hydrocarbons in gasoline. Methane and ethane may be present as dissolved gases but they are now seldom found in a commercial gasoline. Appreciable quantities of propane and butane are frequently present. It is the presence of these hydrocarbons that is the cause of vapor lock. Propane is especially objectionable because the small quantity of 1 per cent will raise the vapor pressure 2 pounds. Vapor pressure must be kept low and the limits set have been found to be consistent with satisfactory volatility. Investigations at the U. S. Bureau of Standards have indicated that the vapor lock temperature at sea level is 22° F. lower at 10,000 feet, equivalent to an average lowering of 2.2° F. per 1,000 feet increase in altitude. The 10 per cent point of the distillation test and the specification of the Reid vapor pressure test control vapor lock qualities. The average vapor lock in summer is approximately 130° to 135° F., and the maximum about 145° with a minimum around 120° F.

Many operators of a gasoline motor believe that the power generated is entirely proportional to the quantity of gasoline used, overlooking the quantity of air that must be mixed with the vapor for maximum efficiency. The combustion of each pound of gasoline requires over 16 pounds of air; this is equivalent to 1,200 cubic feet of air to 1 gallon of gasoline. The introduction of larger quantities of gasoline into an engine to develop greater power is a comparatively simple matter, but greater difficulty is involved concerning the corresponding quantity of air, particularly at great speeds and high altitudes. It is this difficulty which has led to greater use of the high compression engine.

With the introduction of the high compression motor there entered a peculiar result of far reaching importance. Ricardo while investigating gasolines found some produced a combustion knock to a greater degree than others, and he originated the term highest useful compression ratio, or H.U.C.R., for the purpose of classifying motor fuels. Numerous investigators have

Administration building of the Municipal Airport at Tulsa. This airport held the record for the world in the number of passengers handled in and out

Only a Dubbs licensee can make Dubbs cracked gasoline—that's a manufacturing advantage

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And he can build a business other refiners can't take away from him

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

contributed to show that this tendency to knock was a characteristic of the source of the gasoline. The chemical composition of gasoline is not always the same; it varies with the petroleum refined and the method of manufacture. The gasoline made from a pure paraffin hydrocarbon oil has been found to be a knocker but the same oil may be converted into a gasoline much less objectionable in this respect by means of the cracking process.

The selection of petroleum as the source of gasoline which would be comparatively free from this knocking tendency is not feasible, so the marketing of gasoline has advanced to the practice of grading gasoline on a knock basis. The use of chemicals which, when added to a gasoline, will tend to prevent or reduce the knock has become important. This development required some satisfactory method for measuring this property and expressing it in an acceptable form. After some years of research the industry has accepted a certain form of engine for use when making the test and a mixture of the two hydrocarbons, heptane and octane as the unit for comparison.

At the September, 1926, meeting of the American Chemical Society, Dr. Graham Edgar proposed that mixtures of normal heptane and iso-octane were suitable for knock rating standards. These hydrocarbons are very similar in many respects, have almost the same boiling point, heptane boiling at 209.1° F. and octane at 210.7° F., but they differ to a great degree in the tendency to knock when used as a motor fuel. Heptane is a bad knocker, worse than any known gasoline, while octane is practically free from this property. Doctor Edgar explained that it was possible by the use of various mixtures of these two substances to duplicate the knock intensity of any gasoline when tested, or matched, in an engine under identical conditions. For example, a gasoline behaving in exactly the same manner as a mixture of 70 per cent octane and 30 per cent heptane, is graded as equivalent to 70 per cent octane; which, for convenience, is shortened to 70 octane number. Also, a fuel exactly matching octane, 100 per cent, would be graded 100 octane number. This system was officially adopted by the Society of Automotive Engineers, May 25, 1930, and is now quite generally used in the United States for expressing the antiknock value of gasoline.

A gasoline having a high antiknock rating, say 70 octane number, does not necessarily contain any octane; however, heptane and octane are hydrocarbons with boiling points within the gasoline range and both of them may be present in gasoline. There are several substances which will inhibit this fuel knock, some may be naturally present in the gasoline made from certain kinds of petroleum, or they may be built in the refinery, as in the cracking process, and others may be added to the gasoline, an important example of this class being tetraethyl lead. Such gasolines will of course vary in knock rating and may be classified by comparing their behavior with suitable mixtures of heptane and octane. Octane number is simply an accepted term, a form, or model for measuring the detonating property of a motor fuel; therefore a standard. It is a model for comparison in the same way that certain standards are used for indicating temperatures, heat units, weight and volume. In other words, an equivalent.

Earl Bartholomew, of the Ethyl Gasoline Corp., Detroit, Mich., says that knock rating is now perhaps the most important characteristic of automobile and aircraft fuels; in fact, knock ratings have become so inseparably associated with gasoline specifications that it is easy to forget they have not always formed a part of the description of fuels. Five years ago little was known about the knocking properties of fuels, apparatus for the determination of knocking tendency was extremely crude and factors which influence detonation scarcely understood at all. Perhaps never in history did the characteristics of a material become as important in so short a period and it is doubtful whether satisfactory apparatus for the measurement of a characteristic of a material as important as the knocking tendency of fuels was developed in as short a period. It was to be expected that confusion regarding knock ratings would exist for a number of years. Fortunately, however, the entire situation is now very much clarified and all indications point to a rapid increase in the general understanding of the chemical relations and engine conditions which influence detonation.

The average antiknock rating of 207 regular priced gasoline samples recently collected in 20 representative cities throughout the United States was 62.5 octane number. This was in the twenty-third semiannual gasoline survey of the Bureau of Mines. The average rating for 105 premium price samples was 77 octane number, a gain of 3.3 units over the average results of the previous survey. The average of all ratings on the 312 samples was approximately 67 octane number, and less than 18 per cent of the samples are rated below 55 or above 70 octane number. Of the samples of competitive price gasoline, 32.4 per cent are in the range 60 to 64 octane number, whereas 72.5 per cent are in the range 55 to 69 octane number. Of the premium-price motor fuels, 43.8 per cent of the samples are rated 75 to 79 octane number and 76.2 per cent are in the range of 70 to 84 octane number.

Chemicals are known which when added to gasoline tend to inhibit knock. The first of these to become important was benzol or benzene. This has been used in large quantities in the proportion of 40 per cent of the gasoline mixture. Extensive use of benzol is not possible because the supply is limited. One objection to it is the large quantity of sulphur it may contain, sometimes this is present to the extent of nearly 2 per cent. Some of the more important knock inhibitors are listed in the table:

KNOCK INHIBITORS FOR MOTOR FUEL

	Relative effectiveness (volume)
Benzene	1.0
Toluene	1.093
Xylene	1.20
Alcohol	1.85
Ethyl iodine	13.87
Xylidine	12.03
Toluidine	11.36
Aniline	11.45
Tetraethyl tin	30.4
Diethyl selenide	62.6
Diethyl telluride	250.0
Iron carbonyl	250.0
Nickel carbonyl	277.0
Tetraethyl lead	528.0

The relative effectiveness noted in the table is based on benzol as the unit of measure.

The comparisons reported in the above table indicate that tetraethyl lead is over 500 times more effective than benzol; this explains why the merits of this chemical are so widely recognized. At the present time it is estimated that about 12½ per cent of all motor gasoline, or approximately 6,000,000 gallons a day, consumed in the United States is treated with this chemical.

Some difficulty was met with during the early use of tetraethyl lead because during the combustion some of the lead was converted to the oxide and this accumulated on the spark plugs and valves, causing the plugs to short very quickly and the valves to stick. Finally, it was discovered that it was possible to overcome this trouble by the addition of a halogen bearer, which had the effect of combining with the oxide during combustion and forming a volatile compound, which was ejected through the exhaust ports.

The concentrated ethyl fluid is now made in one mixture consisting of 54.5 per cent tetraethyl lead, 36.4 per cent ethylene dibromide, and 9 per cent halowax oil, monochlornaphthalene. The specific gravity is 1.79 at 20° C. It is entirely soluble in gasoline.

The Stanavo gasoline specification is for a high grade fuel to be used in aircraft. The important specifications relate to knock rating and volatility, as determined by the distillation test.

The antiknock rating shall not be poorer than that of a mixture of 74.5 per cent iso-octane and 25.5 normal heptane, by volume, when tested in the Ethyl Gasoline Corp.'s Series 30 engine with a jacket temperature of 300° F.

The required volatility is indicated by the following maximum distillation temperatures:

Per cent off	Temperature °F.
5	124
10	146 to 164
50	203
90	257
96	302
Max.	329
98	Recovery

Low gum content, freedom from acid, and low sulphur percentage are required as in all aviation gasolines. The gum content and corrosive sulphur are controlled by the copper dish test; that is, no gray or black coloration shall be formed when 100 cc. are evaporated.

No crystals or solid matter shall be formed at 58° below zero F. The gasoline must be free from water and suspended matter.

Technologists of Standard Oil Co. of New Jersey, one of the member companies of Stanavo Specifications Board, Inc., have developed an aviation gasoline which will reduce fire risk. The new gasoline has a flashpoint of 107° F., as compared with a flashpoint of from zero to 28° F., for ordinary grades of gasoline. The new fuel, which will not be offered commercially for some time, is produced by the hydrogenation process, with particular attention to high flash qualities. It has an octane number of 82.6 without addition of any antiknock. Tests so far have demonstrated that present methods of fuel injection, used in ordinary aircraft engines, are not suitable for use with this type of fuel. In order to derive full benefit from it a special carburetor and induction system must be installed.

Before concluding this paper reference should be made to the automotive type of the Diesel engine and the kind of fuel it requires. The original Diesel patent of 1892 described an engine which was to use powdered coal for fuel. The essential or fundamental feature of this form of engine is that the fuel and air are compressed to such a pressure that enough heat will be developed to ignite the mixture and the force of the resulting explosion is the power. The present engine of this design with a compression ratio of 16 to 1, and air temperature 60° to 70° F., will develop a temperature of 1,000° F., high enough to ignite spontaneously, most petroleum oils.

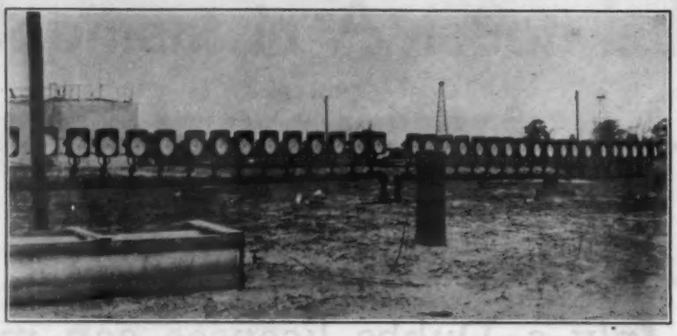
The Diesel aircraft engine requires an oil that has undergone considerable refinement when compared with ordinary fuel oil. Several samples of this oil were found to fall within the limits indicated in the table:

DIESEL AIRCRAFT FUEL OIL

Gravity, A.P.I.	36-42
Flash, °F.	150-175
Viscosity, Say. Univ. at 100° F.	48-56
Sulphur, per cent	0.05-0.4
Carbon residue	0.3-0.6
Water	none
Sediment	none
B.t.u. (40° A.P.I.)	19,850
Color	Yellow—light brown

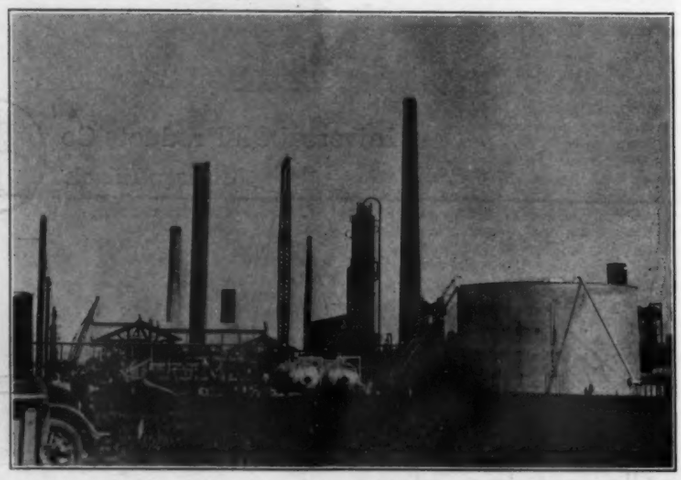
These analytical data indicate that the oil is a semirefined distillate, an entirely different product from commercial fuel oil of low gravity, high flashpoint, high percentages of sulphur and carbon residue; in fact, the properties shown are those similar to kerosene. A distillate of this character may sell on the present market for less than gasoline; however, hardly less than 25 per cent off.

TESTING METERS ON NATURAL GAS PIPE LINES



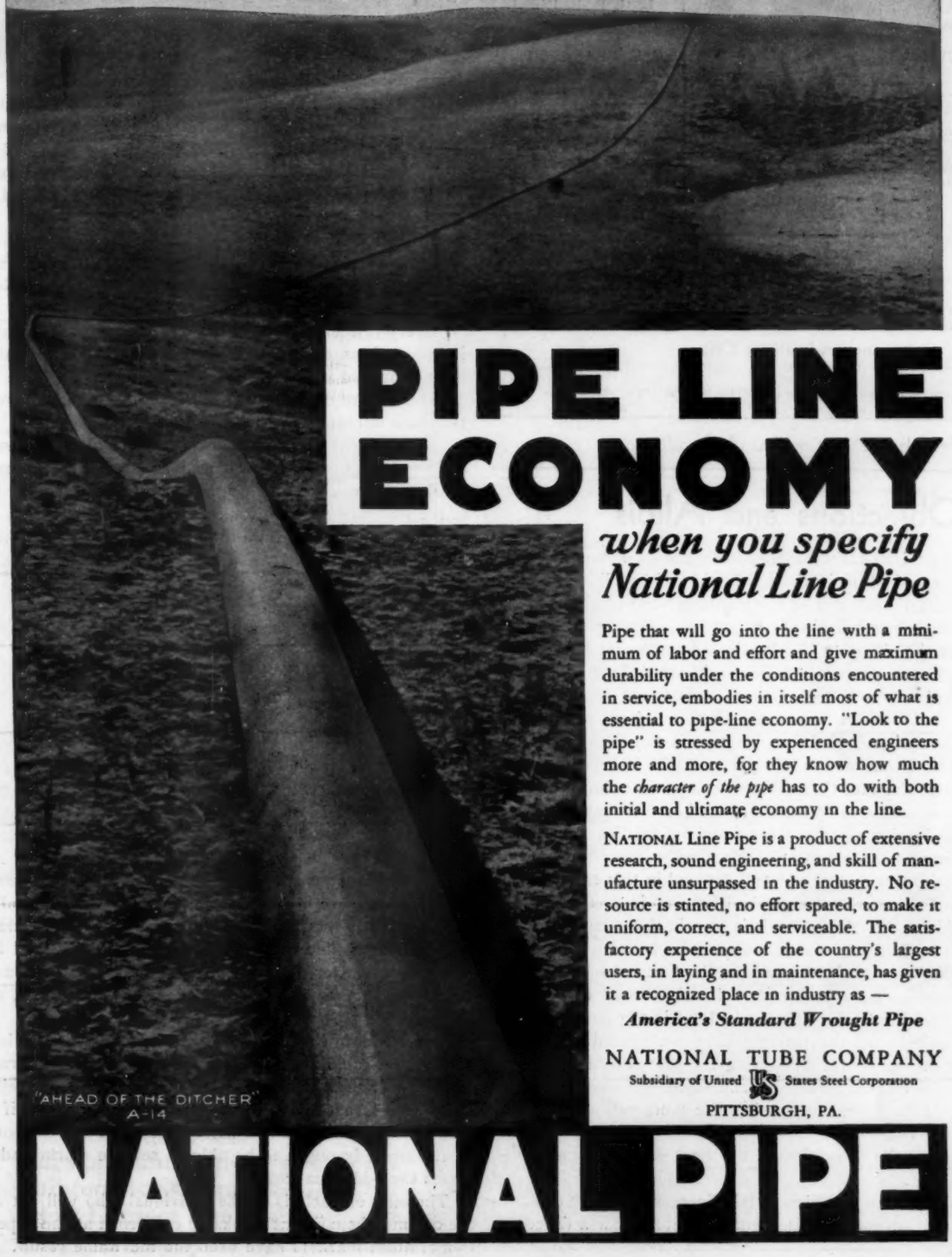
Testing meters at Gulf Production Co.'s gasoline plant at Overton, Texas. Thirty-four meters are undergoing test on the two gas lines

REFINERY AT FORT WORTH IS BEING RECONDITIONED



Part of Magnolia Petroleum Company's No. 1 refinery at Fort Worth, which is undergoing extensive repairs, and at which some new equipment is being installed

You adopt the first step to



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Objections and Alibis

One of the most important things facing the oil industry at this time is immediate reduction in the production of gasoline, and perhaps additional curtailment will be needed during the coming fall and winter due to the seasonal decline in actual consumption.

It is true that the situation is complicated somewhat by the fact that it is not yet known what allowances will have to be made for the shutting out of imports by the new federal excise tax.

It is possible that within a few weeks there will be some increase in the demand for domestic gasoline due to this shutting out of imports although this situation has not yet made its appearance.

However, due to the fact that refining companies who have been importing gasoline will arrange their operations so that they will take care of their foreign requirements from their refineries abroad, there will be a tendency to offset any reduction in imports by a similar reduction in exports so that over-all demand in this country will be approximately the same as if there had been no import tax.

Regardless of how this works out it is certain there can be no development which will free domestic refiners from the necessity of curtailment for the balance of this year and the forepart of next year.

One thing seems to have been overlooked in regard to refinery curtailment. In contrast to the plan worked out in the crude oil producing end of the industry the refiners have not shared equally in the program of reducing operations during the past several months.

For instance, the United States Bureau of Mines report for the first five months of the year, compared to the same period last year, shows the following changes:

The production of the refineries on the East Coast shows an increase of 3.6 per cent.

The refineries in the Appalachian district increased 7.2 per cent.

The refineries in Indiana, Illinois, Kentucky, etc., show a decrease of 5.9 per cent.

The plants in Oklahoma, Kansas and Missouri reduced their production 14.2 per cent.

Those of Inland Texas show a decrease of 10.8 per cent.

North Louisiana and Arkansas refineries increased 3.8 per cent.

The Texas Gulf Coast refiners decreased their production 5.9 per cent and the Louisiana Gulf Coast plants increased 7.1 per cent.

Rocky Mountain area refiners cut their production 26.6 per cent.

Thus, while some areas contributed far more than their share to the 5.1 per cent curtailment in production for the whole United States other areas increased their production.

There can be no question that those areas which failed to do their share in decreasing gasoline production in line with the decline in demand are responsible for the fact that gasoline stocks at the present time are not as low as they ought to be, and, unless they are willing to revise their policy, they must be held accountable for the disaster that will assuredly follow if operations are not properly controlled for the next eight or nine months.

In the crude oil producing curtailment program all operators, both large and small, have shared equally in the reduction of production.

What would have happened to the crude production program if some producers instead of decreasing their daily output had been permitted to increase it?

Or, rather, what did happen when operators here and there refused to co-operate, persisted in overproduction and brought down the market for everybody.

Proration of crude oil production has been a success because it was possible to make every producer share the burden.

The same program, to be successful, must be carried out with the same thoroughness in the refining industry.

Every refinery operator must be willing to do his share in curtailing operations, otherwise he will defeat the entire plan just as would have happened in the producing industry.

The excuse of some operators has been that they could not curtail their operations without adding to their costs.

This is true. You cannot use any piece of equipment or machinery at 75 or 90 per cent of its capacity and secure maximum efficiency.

But the refinery operator must remember that he is just one cog in the machine working for the welfare of the entire industry.

After all, the sacrifices to be made by the refiner through curtailing his operations are negligible compared to those made in the crude producing and marketing divisions.

A refinery operating at 75 per cent of capacity, in most cases, will add no more than a quarter of a cent per gallon to production costs of gasoline.

What is that loss compared to 25 or 50 cents improvement in the price of crude and two or three cents per gallon in the retail market structure?

If refiners as a unit persist in producing gasoline in excess of the demand they can look forward to a substantial reduction in their market structure extending through crude oil to the retail market.

On the other hand, if they make the necessary sacrifice in operating efficiency over the next few months they will contribute their part to the general curtailment program required by conditions and the whole industry can continue on a profitable and prosperous basis.

Meanwhile we hear the same old objections and alibis that were raised when it was proposed to curtail crude oil production. It was declared impossible because of supposed natural and legal obstacles when, as a matter of fact, the only obstacles were in the operators themselves. As soon as they made up their minds it could be done, it was accomplished.

Curtailment of refinery operations is met with declarations of not being practicable and the like. There is nothing impracticable about running only as much crude as needed to supply the gasoline required.

As to increased cost of operating below capacity, if it brings better returns in cash than capacity operations at a loss or barely living profit, anybody ought to be able to see the market advantage overcomes the additional cost.

The only obstacle is in the individual who will not co-operate for the common benefit but thinks he can profit at the expense of others. Demoralized markets have been the inevitable result.

Let the refining industry have done with objections and alibis and follow the example of the producers. The only difficulty is with themselves. They can make their own market, either wreck it or stabilize it.

It is worth trying and as a unit they have never tried it.

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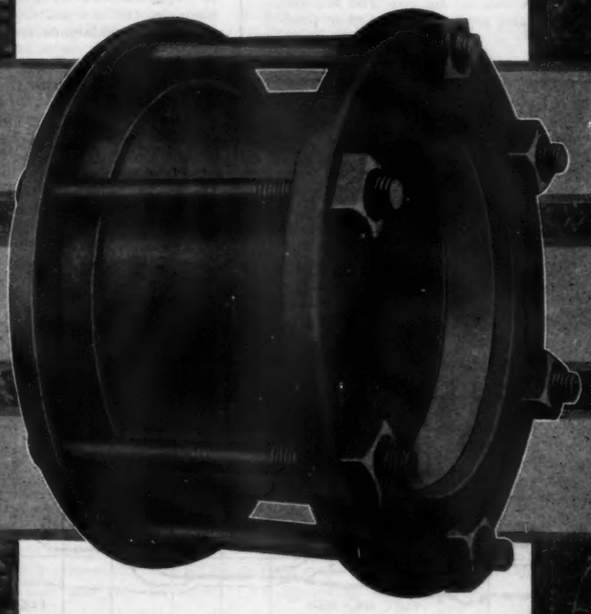

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Furnace Oil Prices Again Advance in Oklahoma Market With Higher Natural Gasolines

By C. O. WILLSON

Furnace oils in Oklahoma (Group 3) continued strong over the past week and prices were advanced one-eighth cent on all the better grades. There are still many buyers of all grades of furnace oils who are anxious to make contracts for the coming season including those who are willing to speculate with the sellers on a flat price over periods running from 60 days to six months. The advantage in this market still remains with the refiners in the Mid-Continent and Middle West. They are not burdened with excess supplies and do not expect to be and as long as that situation continues additional price advances are in prospect.

Low cold test fuels are also strong in the Oklahoma market and some grades were advanced. The presence of some high cold test fuels and gas oils in Oklahoma and adjoining Mid-Continent refining areas, particularly the Panhandle area, has obscured the real fuel oil market in Oklahoma to some of the trade. There are skimming plant fuels ranging from 40 to 90 cold test which are hard to sell at any price. Limited quantities of residua from cracking stills with a high carbon content and high viscosity also have been offered at prices ranging from 20 to 25 cents per barrel. However, the low cold test grades meeting the usual specifications in regard to sulphur are scarce in Oklahoma and no bargain material is offered. Refiners for the most part are in a position to confine their fuel oil production to the requirements of their railroad contracts and regular customers within short distances of their plants.

Natural gasoline was another product to show strength. The 26-70 grade was selling the first of the week at a price range of 2¼ to 2⅜ cents and with a continuance of buying it was predicted that the price would advance to 2½ cents by the end of the week. The lower vapor pressure grades also were stronger.

Refinery Gasolines

The situation in refinery gasolines is practically the same as it has been over the past month. So far as spot prices are concerned the best that can be said is that the market is holding its own. The demand is at the high point of the year. Due to this fact, a majority of Oklahoma refiners have had their contract requirements increased and they are out of the spot market. Refiners who sell on the spot market are not burdened with excess business but at the same time buying has been sufficient to prevent any sustained weakness. From 10 to 25 cars are occasionally offered at price concessions of from one-eighth to one-fourth cent per gallon but after this material is absorbed the market returns to its former levels.

Some concern is being expressed as to what will happen after the season of maximum consumption is ended. With contract requirements less, several refiners will have the choice of reducing their output or becoming active in the open market. If a number adopt the latter policy there is no question that lower prices are assured.

Stocks Increase

In regard to the statistical position of Oklahoma refinery operations, the current data of the American Petroleum Institute are enlightening. For the week ending July 23 the A.P.I. report shows that Oklahoma, Kansas and Missouri refiners ran 213,700 bbls. daily to their stills, a decrease of 73,700 bbls. daily or 24 per cent when compared with the corresponding week of last year. This figure is representative of comparative operations for the two years over the past several weeks. Oklahoma refiners and a majority of those in other Mid-Continent areas have reduced their operations much more than decline in total demand for the country as a whole.

Unfortunately this policy has not been followed by some of the refining groups which compete with the Mid-Continent. Most of the refining groups east of the Mississippi and the Gulf Coast have shown either increases or very small decreases when compared with the same periods last year.

Despite the consistent reduction in

Refined Market Barometer

Refinery gasoline prices were generally steady over the past week. All sections reported a heavy consumption, the demand being particularly strong in the West Coast states which are enjoying a large tourist business due to the Olympian Games at Los Angeles. Natural gasolines were strong in the Mid-Continent and prices higher on all grades. Areas serving sections in which furnace oil is used during the fall and winter, report an improved demand with no distress material in the hands of refiners. Some improvement in the industrial demand for heavy fuels and gas oils was noted. Kerosene prices unchanged. Only change in lubricants was lower prices on some grades of lubricants in East. Wax prices unchanged.

Mid-Continent—Refinery gasoline unchanged except for reductions in North Louisiana and Arkansas. Natural gasoline prices higher. Furnace oil and tractor fuel distillate prices advance. Kerosene steady. Fair to strong market for low cold test fuels and gas oils. High cold test fuels weak. Wax unchanged.

East Coast—Refinery gasoline strong with heavy seasonal demand. Kerosene demand slow. Bunker fuel oil and gas oil quiet. Some grades of cylinder stocks reduced. More export inquiries for wax.

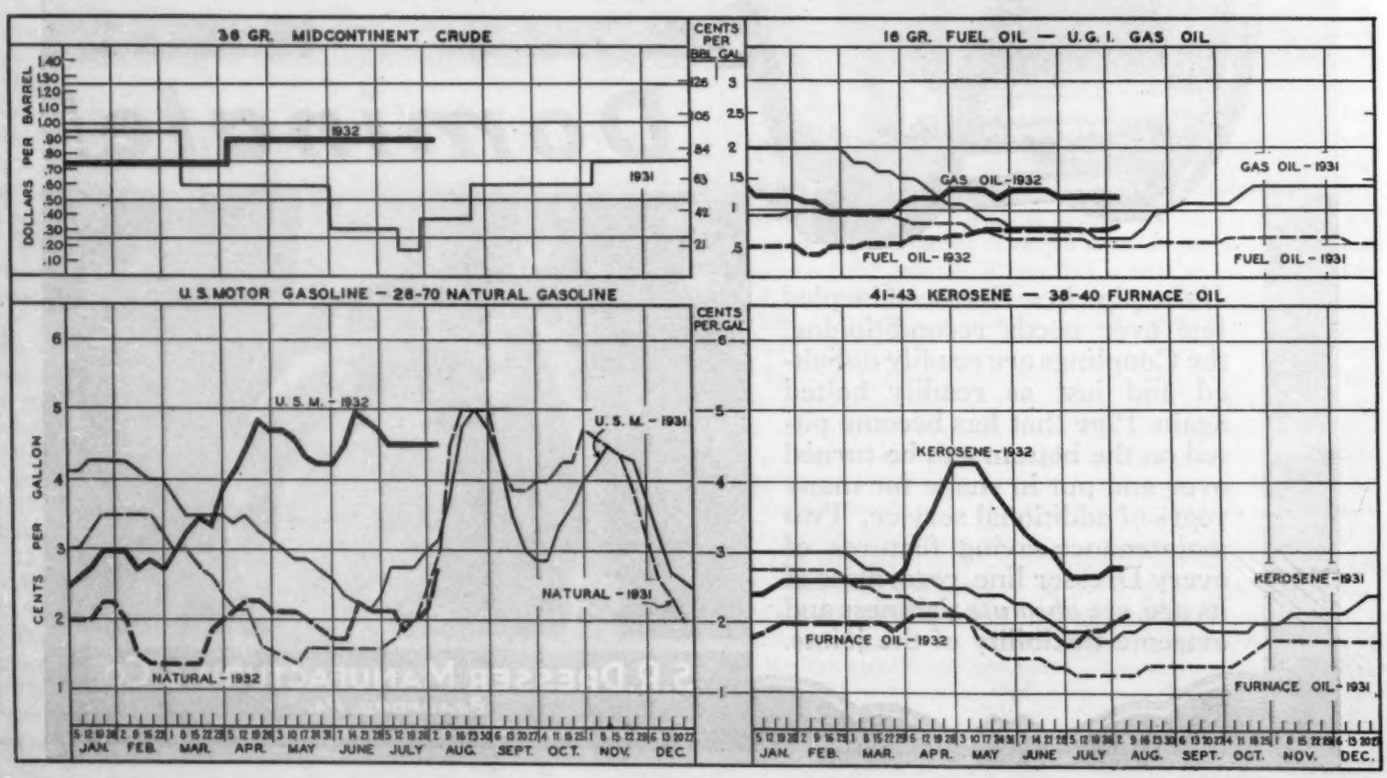
Pennsylvania—Fair demand for bright stocks and neutrals and prices steady. Good movement of gasoline. Kerosene slow.

Chicago—Gasoline market unsettled. Good demand for blending naphthas. More kerosene offered. Fuel oils and distillate market strong.

Gulf Coast—Market generally quiet. Slow demand for pale and red oils.

California—Heavy demand for gasoline and prices steady. Other products unchanged.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Oklahoma, Kansas and Missouri refinery operations, gasoline stocks at refineries on July 23 totaled 3,488,000 bbls., an increase of 771,000 bbls. or 28 per cent when compared with the same period a year ago. This shows that while refiners in the three states as a unit reduced their operations, operators in other areas obtained a part of their business so their inventory situation is not as strong by 750,000 bbls. as it was a year ago.

Considerable complaint is heard among Mid-Continent refiners regarding this situation. Obviously, if refiners in all areas had followed the policy of the owners of the 120 plants in the Mid-Continent, gasoline stocks now would be much less instead of greater than a year ago and the industry would be enjoying better prices, with nothing to fear regarding developments over the coming fall and winter months. Refiners who have contributed their part and more to the curtailment program now feel that it is up to operators in other areas to reduce their crude runs to stills and thus bring about a sounder statistical situation in the gasoline market. It is pointed out that the next six weeks is the time to bring this desired condition about for at the end of that time, the domestic demand for motor fuels will show a steady decline until late winter.

While Oklahoma, Kansas and Missouri refiners have not benefited from the curtailed operations so far as gasoline inventories are concerned, the reductions have resulted in lower stocks of fuel oil and gas oil according to weekly reports of the American Petroleum Institute. These stocks in the hands of Oklahoma, Kansas and Missouri refiners on July 23 totaled 3,467,000 bbls., a decrease of 1,665,000 bbls. or 32.4 per cent when compared with the same period a year ago. Refiners in these same states have had fuel oil and gas oil stocks in times past, totaling close to 8,000,000 bbls.

While the demand for fuel oil and gas oil has not improved over the past year, the reductions in crude runs to stills has lowered the supply to the point where many refiners have been compelled to reduce their inventories. This has brought about a strong stock situation and accounts for the fact that in the better grades of residuum and overhead fuels, it is a sellers' rather than a buyers' market. This same curtailment of Mid-Continent refinery operations also aided the kerosene market during the spring months when the demand was heavy.

Gasoline and Naphtha

Prices on gasoline and naphtha carried in this issue for Oklahoma (Group 3) are again the same as the previous week and there were no changes in market conditions. Some pessimism among sellers is apparent relative to the ability of refiners to maintain present prices unless buying improves or production is reduced. The low octane U. S. Motor gasoline was moving to the trade at 4½ to 4¾ cents. Resale material was reported sold last week on an Oklahoma basis as low as 4⅛ cents.

There is quite an active demand for blending naphthas. The demand is greatest for those having endpoint of 437 or less with a low initial. All grades, however, are in demand. Jobbers are learning more about blending and many are buying the low vapor pressure natural gasolines and blending up to 50 per cent with refinery naphthas or gasolines. By this operation they are able to lower the cost of their motor fuels and in many cases improve quality especially the antiknock ratings of their finished products. Sales of 450 endpoint naphtha at 4½ to 4¾ cents and 437 endpoint naphtha at 4¾ cents were reported during the week.

Natural Gasoline

Prices on natural gasoline were practically the same in the Oklahoma and North Texas markets. The movement to the coast of 26-70 both on contracts and spot sales has improved. The demand for the northbound movement is largely for the lower vapor pressure grades. The 18-55 grade was selling over a price of 2¾ to 3 cents. The 15-pound material was scarce at 3½ cents and the high recovery 11-pound material was bringing a low of 4 cents. Sales of 9-pound material were made up to 4½ cents.

Kerosene and Distillate

Kerosene prices were unchanged in Oklahoma with specification 41-43 water white to the trade bringing 2¾ to 2⅞ cents. The 42-44 grade was scarce at a low of 2⅞ cents with sales reported up to 3¼ cents.

Tractor fuel and furnace oil distillates moved up one-eighth cent. In Oklahoma there were buyers of the prime white, low flash grades at a low of 2¼ cents and the 38-40 straw at a low of 2⅛ cents. Little material was offered by refiners at these prices. The 32-36 gravity furnace was bringing a low of 1⅞ cents the first of the week.

Fuels and Gas Oil

The low gravity fuels under 30 cold test were advanced to 35 cents in this week's quotations. As previously explained there are high cold test grades available under these prices, some Panhandle material reported sold during the week on a basis of 20 cents, Oklahoma. Gas oil quotations are unchanged but except for the high cold test U.G.I. material the market is strong.

Lubricants and Wax

No changes were made in lubricating oil prices. Occasionally bargain purchases are reported in neutral oils, cylinder stocks and the finished motor oils but this business so far has not been large enough to disturb the general market. The wax demand is slow with prices unchanged.

Increased Use of Lake Asphalt Reduces Consumption of Petroleum Asphalt

Decreased demand, domestic and foreign, for petroleum asphalt, and increased imports of lake asphalt and grahamite reduced the 1931 output of petroleum asphalt at United States refineries 248,198 short tons in comparison with 1930, and during 1931 added 16,732 tons to stocks held at refineries. Production of asphalt (exclusive of road oil) at petroleum refineries in the United States amounted to 2,975,690 short tons in 1931, compared with 3,223,888[1] tons in 1930 and 3,830,457[1] tons in 1929, according to figures compiled by the Bureau of Mines, Department of Commerce. Stocks held by refineries at the beginning of 1931 totaled 287,891[1] tons, or 11,201 tons more than was held at the beginning of 1930. By the end of 1931 refinery stocks increased to 304,623 tons. Exports of petroleum asphalt in 1931 were only 288,099 short tons, a decrease of 122,290 tons from 1930. On the other hand, imports, chiefly of lake asphalt and grahamite, amounted to 73,672 short tons, or 20,475 tons more than in 1930. The indicated domestic demand for petroleum and lake asphalt equaled 2,744,531 tons in 1931, a decline of 110,964 tons from the indicated consumption in 1930.

Of the 2,975,690 short tons of asphalt manufactured at petroleum refineries in 1931, 1,700,946 tons was made from foreign crude oil, imported chiefly from Venezuela, Colombia and Mexico, and 1,274,744 tons from domestic crude petroleum. Included in the 1931 total was 42,497 tons of other petroleum distillates blended with the asphalt to produce commercial varieties of the required hardness and consistency.

Sales of petroleum asphalt by refineries in the United States were 10.7 per cent less in quantity and 28.2 per cent lower in value in 1931 than in 1930. From 3,216,440[1] short tons, valued at $34,622,032, in 1930, they decreased to 2,873,291 tons, valued at $24,861,339, in 1931. Decreased construction of first-class highways during 1931 resulted in a decline of 17.6 per cent in sales of paving asphalt. Sales of paving flux decreased 2.5 per cent from 1930 to 1931. A decline of

(Continued on Page 47)

[1]Revised figures.

PRODUCTION, RECEIPTS, STOCKS, CONSUMPTION AND SALES OF PETROLEUM ASPHALT (EXCLUSIVE OF ROAD OIL) AT PETROLEUM REFINERIES IN THE UNITED STATES IN 1931, BY DISTRICTS, IN SHORT TONS

District—	Production	Receipts from other sources	Stocks Dec. 31, 1930*	Stocks Dec. 31, 1931	Consumption at refineries, transfers, losses	Sales
East Coast	1,507,699	6,955	95,754	85,506	30,136	1,494,756
Appalachian	123,349	1,408	9,551	19,922	653	112,733
Indiana-Illinois	426,037	148	70,331	59,039	15,124	392,903
Oklahoma, Kansas, Missouri	19,126	.....	5,549	3,915	128	20,632
Texas:						
Gulf Coast	168,785	1,227	8,619	8,398	10,349	159,884
Rest of State	.....	.....	.....	.....	.....	.....
Total Texas	168,785	1,227	8,619	8,398	10,349	159,884
Louisiana-Arkansas:						
Gulf Coast	199,642	.....	41,307	27,311	141	213,497
North Louisiana and Arkansas	77,893	.....	7,983	22,739	.....	63,137
Total Louisiana-Arkansas	277,535	.....	49,290	50,050	141	276,634
Rocky Mountain	11,603	.....	3,917	2,213	1,992	11,320
California	442,501	936	44,380	45,580	37,818	404,419
Grand total	2,975,690	10,674	287,891	304,623	96,341	2,873,291

*Revised figures.

American Petroleum Institute Weekly Refinery Statistics

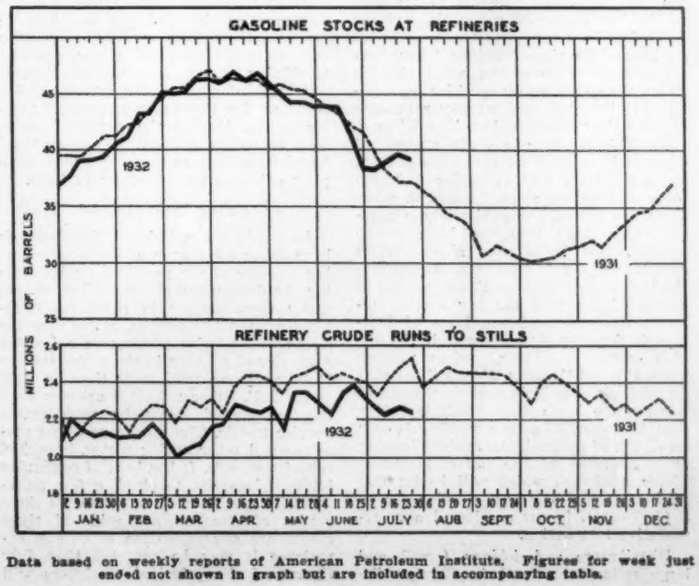
Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Gasoline stocks. (4) Gas oil and fuel oil stocks All figures in 42-gallon barrels.

Week Ending July 30, 1932, Compared to Week Ago

	Week ending July 30				Week ending July 23			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	450,300	5,092,000	8,107,000	100.0	457,700	6,003,000	7,677,000
Appalachian	91.8	93,000	1,426,000	1,174,000	91.8	93,900	1,825,000	1,121,000
Ind., Ill., Ky.	98.9	288,400	5,252,000	4,363,000	98.9	296,000	5,497,000	4,293,000
Okla., Kans., Mo.	89.6	205,300	3,396,000	3,400,000	89.6	231,700	3,488,000	3,467,000
Tex. Gulf	99.8	408,400	4,701,000	8,441,000	99.8	403,400	4,803,000	8,302,000
La. Gulf	100.0	99,300	1,437,000	4,697,000	100.0	98,600	1,662,000	4,711,000
Inland Texas	76.5	102,700	1,250,000	2,312,000	76.5	103,000	1,266,000	2,455,000
N. La. and Ark.	97.0	41,600	1,022,000	678,000	97.0	44,600	134,000	684,000
Rocky Mtn.	89.4	41,700	1,823,000	621,000	89.4	42,700	1,841,000	639,000
California	96.7	444,600	12,759,000	98,807,000	96.7	491,800	12,875,000	98,761,000
Total U. S.	95.1	2,175,300	38,158,000	132,600,000	95.1	2,263,400	39,394,000	132,210,000

Week Ending July 30, 1932, Compared to Year Ago

	Week ending July 30				Week ending July 25, 1931			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	450,300	5,092,000	8,107,000	100.0	483,100	6,489,000	9,576,000
Appalachian	91.8	93,000	1,426,000	1,174,000	91.8	117,600	1,338,000	1,420,000
Ind., Ill., Ky.	98.9	288,400	5,252,000	4,363,000	96.6	334,100	5,483,000	3,847,000
Okla., Kans., Mo.	89.6	205,300	3,396,000	3,400,000	98.6	296,200	2,840,000	5,160,000
Tex. Gulf	99.8	408,400	4,701,000	8,441,000	91.3	393,700	5,656,000	7,347,000
La. Gulf	100.0	99,300	1,437,000	4,697,000	100.0	116,700	815,000	1,864,000
Inland Texas	76.5	102,700	1,250,000	2,312,000	....	144,300	1,166,000	3,275,000
La. and Ark.	97.0	41,600	1,022,000	678,000	....	66,300	146,000	947,000
Rocky Mtn.	89.4	41,700	1,823,000	621,000	89.3	59,400	1,676,000	829,000
California	96.7	444,600	12,759,000	98,807,000	96.5	502,700	11,681,000	98,528,000
Total U. S.	95.1	2,175,300	38,158,000	132,600,000	94.7	2,514,100	37,289,000	132,793,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table.

Increased Buying in Chicago Area Refined Market Expected After Dearth of Good Orders

By ROBERT C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, Aug. 1.—The erratic behavior of the spot markets during the past two years has at various stages impressed even brokers and free-lance distributors with the reasonableness of certain modifications of the Sherman and Clayton acts, and events of the past two weeks should convince the most blindly partisan that the methods, or some effective variation, which have brought comparative stability to the crude oil situation must be applied in the refining branch of the oil industry without delay. With the gasoline spot market activity practically at a standstill and the contract movement taking nearly all the play, we find the stump wagging the dog with a vengeance. Before discussing some interesting findings in gasoline contracts distillate and fuel oil contracts, the various factors accountable for the current setback in the gasoline tank car markets are presented as set forth by major and minor operators in Chicago district:

Adverse Factors in District

Certain refiners operating in Chicago district have recently lost outlets (some good for at least 8,000,000 gallons a year) elsewhere in the territory to refiners who enjoy a variety of advantages, and this has caused the loser to make a more intensive drive for gallonage in Chicago district and nearby points. Natural gasoline and blending naphtha prices have strengthened, but the prices continue low enough to prevent any arrestment of the strong move toward blended motor fuels on the part of Chicago district jobbers and service station operators. Constant resistance on the part of district buyers to classification of gasolines below 62 octane number as "semipremium" materials justifying a quarter to three-eighths of a cent above the "below 57 octane gasolines" has forced the lower half of the "middle octane" bracket to the level of the low antiknock materials, and the result has been a tendency to weaken the position of the three brackets. Thus, buyers are prone to expect price shading where the no antiknock specifications gasoline is involved, and narrower spreads between the "guaranteed antiknock" gasolines. This attitude is easily understood when it is pointed out that several third grade gasolines sold at major and cut-price stations are above 57 octane, while there are several companies whose regular grade falls into the high octane bracket, that is, 65 and above. While certain daily published quotations rate the high octane gasoline three-quarters of a cent higher than the low octane material, a representative volume of business is done by major companies in the high octane gasoline at prices ranging from 4⅞ to 5⅛ cents, Group 3, so that on the basis of today's markets the spread between the low and the high is half a cent. However, 63 octane gasoline is only an eighth of a cent below the high bracket price. Business such as that of Benzoline Motor Fuel Co., which will be let this week at around 3½ cents a gallon, Group 3 (125 cars), is not considered a representative transaction.

Distributors and jobbers (small and large refiners as well) in Chicago district complain that refiners (the other refiners) have paid little or no attention to the warnings that they must curtail their crude oil runs to stills. Here and there it is contended that officials charged with maintaining production restrictions lack a great deal in vigilance, while others blame refiners who have their own production. But it would be wrong to suppose, if well posted observers are not mistaken, that the major companies who are among those paying 92 cents a barrel for crude oil, are uniformly following the guide of the A.P.I. and Conservation Board reports and forecasts. As far as Chicago district is concerned, distress gasoline is absent, but there is no scarcity of material in the field, where it is reported that movement is exceedingly dull. The trade is on the off side of the peak demand season, but there is still a strong feeling that the active jobber buying which has been in the offing since July 4, will actually make its appearance this week. In fact, a number of distributors have been saying for the past three weeks that August 1 would mark the beginning of a steady pickup in the gasoline open markets. It is certain that with a reported 7 per cent increase in gasoline stocks in the country and a 15 per cent decrease in consumption, the expected improvement has obstacles to overcome.

Gasoline Contracts

The 4½ to 5½ cents, with split above and below, contracts were abandoned in most of the territory some time ago when buyers held out and various refiners broke ranks to keep up their gallonage at any cost. The result was a 5-cent contract with split below and the spot market above. If the Group 3 spot market should be 4½ cents the half-cent difference was split between the refiner and the buyer. Apparently the new form was meeting the situation, and not a few observers were surprised at its apparent success, until some later refinements came to light. The paint on this lily, as revealed by several refinery executives who have made an investigation, is no less than a letter which sometimes accompanies this form of contract. In this letter the buyer is guaranteed an extra half cent or a cent on various grounds, usually advertising and rental. In one case reported the minimum spread is 6½ cents on the regular grade. To meet this sort of competition one major company is offering outright a margin of 3¼ cents on the third grade and a margin of 5½ cents on its nationally advertised regular grade. During the touring season, when motorists seek out their accustomed brand from town to town, the major company offerings are especially inviting.

Urban Demand Good

In metropolitan Chicago the motorists have taken advantage of the fine motoring weather of the past two weeks. During the days when unofficial but sympathetic thermometers in the Loop registered around 106 degrees, a trip over the South Shore Drive which required about a quarter of an hour in the cooler months at 50 per) consumed more than an hour and a half. Other principal arteries were likewise slowed down by considerably heavier traffic. The numerous forest preserves and other outing places have had capacity crowds. It has been of particular interest, however, to check a few representative service stations where the three grades of gasoline are sold. If these checks are any indication of general experience it may be expected that July figures of the principal marketers will show that motorists have accepted en masse the third grade gasoline. A major refiner looks upon this development philosophically and says: "We put the third grade gasoline in because we realized that people were being forced to count pennies, and when this necessity is over they will return to the regular and premium grades." There is little likelihood that any revision will be made in the general tank wagon and service station price structure in the territory in the regular grade before September 1; however, these markets are fluctuating in the third grade, with reductions outnumbering advances.

Gasoline Tank Car Markets

Distributors and jobbers continue to stay away from the open markets and the resultant dullness is giving considerable importance to the activities of a number of refiners whose contract business forms a negligible part of their operations. These same refiners, be it noted, are depressing the kerosene markets when advances were apparently justified and distillates were and are moving higher. Some quotations on U. S. Motor for resale are as low as 4¼ cents, and there are indications that in a few cases this price has been made to the trade. The low quotations are not restricted to well-known and constant offenders, and at least one of these refiners breaks with an impeccable tradition. As mentioned above, some of the major and semimajor companies have not been averse to price cutting to get new business, and one major offers price cutters a 3½-cent marginal guarantee on the cheapest grade. Brother marketers were shocked a month ago when a semimajor sought to make a deal with a notorious price cutter in which he guaranteed a margin of 2 cents when the price cutter was selling 1 cent under the regular companies.

It is the general belief in Chicago district oil trade circles that the gasoline tank car markets will continue at about their current levels through this month, after which they will slump down. The marketers, large and small, appear to be disillusioned regarding the ability of refiners to make the adjustments necessary for stabilizing the gasoline markets. "The refiners," says a prominent distributor, "had their choice of cutting their runs or their throats, and they didn't cut their runs to stills. Before they know it, it will be too late and too bad."

Gasoline Tank Car Prices

Gasoline tank car prices Monday reflected the growing anxiety of a number of refiners as the long expected jobber buying activity fails to materialize. The advent of the jobber in a substantial buying role would promptly correct a threatening situation. It is reported that the hand-to-mouth buying policy is in force generally, but this cannot account for a dearth in orders which is no less than that which followed the Federal tax anticipation splurge. For this reason some distributors who have been in business a score of years in Chicago feel that heavy buying is in store and that the next few days will mark an upward break in the gasoline tank car markets. These marketers say that action on the part of refiners, by drastic curtailment of runs and refinery purchasing, to convince the jobbers that prices will go no lower would almost immediately result in brisk spot market activity, and naturally in improvement in the contract business.

Monday's prices showed slight downward adjustments in the ruling markets, although several refiners have practically withdrawn as sellers. U. S. Motor, in nearly all cases 60-62 gravity, was offered to the trade at 4⅜ to 4½ cents, Group 3. The 60-62 400 endpoint material was quoted by half a dozen refiners at 4½ to 4⅝ cents. Prices on higher test materials were nominal and sympathetically lower on the 64-66 375 endpoint gasoline which was offered at 4⅝ to 4⅞ cents. Aviation, fighting grade, and the 68-70 360 endpoint gasoline were unchanged in price, the former quoted at 5 to 5½ cents and the latter at 4⅞ to 5 cents. Most of the aviation movement is on contract, and quotations are often made with ideas of publicity in mind so that occasionally considerably lower prices are made.

Naphtha Tank Car Markets

Blending naphthas, with the exception of the 50-52 450 endpoint material, are slightly advanced in price and in good demand. The blended motor fuel has become an important item with the Chicago distributor and jobber, and it promises to continue so in spite of advances in the 15-pound natural gasoline to a range of 3¼ to 3⅜ cents, and to 2¼ and 2⅜ cents in the 26-70 grade. Prices on lower endpoint blending naphthas Monday were as follows: 52-54 437 endpoint, 62 octane, 4¾ cents; 54-56 437 endpoint, 55-60 octane, 4½ cents; 52-54 400 endpoint, 62 octane, 4⅞ cents. The 50-52 450 endpoint blending naphtha was in little demand and prices Monday were an eighth of a cent lower at 4⅜ to 4⅝ cents.

There was practically no change in the remaining naphthas, including cleaners, three grades of lacquer diluent, rubber solvent, Stoddard solvent, petroleum thinner, V.M.&P. naphtha, and petroleum spirits. A third grade of lacquer diluent is apparently being pushed by several sources and this accounts in part for a slight easing off in the first two grades, the 180-250 material moving down to 8⅜ to 8⅝ cents, and the 140-200 material to 9 cents. The third grade is a 190-270 material and is offered at 6¾ to 7½ cents.

Kerosene Tank Car Markets

The 41-43 water white kerosene has been arrested in its upward movement by the sudden offerings of refiners in Texas and the Mid-Continent. A distributor Saturday called upon a Texas refiner for prices on the 41-43 material and the starting price was 2⅝ cents for resale and the closing price via telephone was 2⅜ cents. Ruling prices to the trade Monday were 2⅝ to 2⅞ cents, a cut of an eighth of a cent. The 42-44 material was scarce and undisturbed in price at 2⅞ to 3 cents.

Fuel Oils and Distillates

Distributors are beginning to realize that distillate and fuel oil markets will be much tighter than anticipated. More extended recycling on the part of several major sources has resulted in a marked scarcity of suitable fuels and heating oils, and it appears evident that the abnormally low markets of last year are definitely not to be repeated the approaching season. Eighth of a cent advances are noted this week in the 38-40 light straw, 2¼ to 2⅜ cents; 38-40 straw, 2⅛ to 2¼ cents, and the 32-36 straw, 2 to 2⅛ cents. The 18-22 fuel oil moved up slightly to 27½ and 32½ cents and the below 18 material advanced to 25 and 30 cents. Differential movement heavy fuels registered somewhat higher advances, ranging from 5 to 10 cents a barrel. Other prices were unchanged and stronger.

Heavy Seasonal Consumption of Gasoline at East Coast Points With Prices at Peak of Year

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Aug. 1.—East Coast refinery gasoline markets closed the month in strong position, with posted prices firmly maintained at principal points and gallonage continuing to hold at peak levels for the year in most instances. Not only is refinery gasoline volume now at its highest point for the year, but prices are also at top levels. The current market for motor gasoline of 65 octane number and above at 8½ to 8¾ cents per gallon in tank cars at New York harbor terminals compares with a quotation of 6 to 6½ cents per gallon at the start of the year, while gasoline under 65 octane, which sold at 5¾ cents a gallon locally early in January, is now bringing 8 to 8¼ cents. Although stocks of motor fuel at refineries and bulk stations in this area have shown a slight increase during the past fortnight, the market remains in strong hands, and outside of an occasional car of gasoline at resale, practically no price cutting under posted levels is reported.

Continued quiet in demand for lubricating oils brought about a further easing in cylinder oil quotations locally during the past week, the decline taking in all of the principal grades. Aside from this development, however, there were no important changes in other divisions of the refined products market during the period under review.

Refinery Gasoline

Refiners report that their current gallonage is running at high levels for the year, and with continued hot weather indicated, the outlook favors a well-maintained demand over the balance of the summer season. There has been a perceptible quickening in business activity in many lines in the East, and this has improved general sentiment considerably, all of which, it is felt in trade circles, must inevitably be reflected in gasoline volume.

Current market quotations in leading tank car markets on the Atlantic seaboard are as follows: New York, below 65 octane, 8 to 8¼ cents per gallon; 65 octane and above, 8½ to 8¾ cents; Boston, below 65 octane, 8¼ cents; 65 octane and above, 8¾ cents; Baltimore, below 65 octane, 8¼ cents; 65 octane and over, 8½ to 8¾ cents; Charleston, S. C., below 65 octane, 7¾ to 8¼ cents; 65 octane and above, 8½ to 8¾ cents per gallon.

Competition in tank car sales at South Atlantic ports has increased somewhat during the week, and price cutting was reported developing on a broader scale at some points. This softness, however, had not extended to the Middle Atlantic or North Atlantic states.

Reports in market circles indicate that a heavy volume of intercompany movement of California gasoline has been arranged for August and September, and it is expected that a sharp spurt in shipments will be witnessed in the near future.

Tank Wagon Gasoline

There were no general revisions in East Coast tank wagon or service station gasoline prices during the week. Unsettled markets are still reported at some points, notably New York City and a few markets in the New England territory, and local price cutting is being resorted to by some of the major marketers to meet competition as it develops, without the formality of "official" price revision.

In New York City the tank wagon price for leading brands is still 10½ cents per gallon. This quotation is only 1½ to 1¾ cents per gallon under the net tank car price posted at local terminals by principal sellers, which leaves independent marketers an extremely narrow margin. Outside of metropolitan New York, however, the posted tank wagon price is generally 3 cents per gallon over that in effect in the city.

Some of the major marketers have taken advantage of current economic conditions to extend their direct marketing facilities, and have taken over retail stations formerly operated by independents. There has been a minimum of new service station construction in this area during the current season, however.

Kerosene

Tank car kerosene volume thus far in the season has not come up to expectations, and the market continues in rather soft position. Refiners are quoting 5½ to 6 cents per gallon for 41-43 water white in tank car lots, f.o.b. refineries, but some shading of the inside price is reported, and it is believed that limited quantities could be picked up at 5 to 5¼ cents.

Fuel Oil

A quiet market for bunker "C" prevailed throughout the week, with the posted price holding at 85 cents per barrel, in bulk, f.o.b. refinery terminal, and 90 cents per barrel f.a.s. Major companies at present are absorbing the import duty on foreign fuel oil they bring in, and they have not yet exercised their perogative of adding the tax in billing customers. It is expected that this policy will be adhered to, and imports held down to low levels, owing to the difficulties which would develop in sales activities if the tax were added. Under the terms of the tariff law, American registry vessels going foreign or engaged in the U. S. East-West Coast trade, via the Panama Canal, would be entitled to a drawback on imported fuel oil which they might purchase. This would establish two price levels, one for operators of American registry vessels and a higher price for foreign buyers, who constitute the bulk of the business at East Coast ports.

Diesel Oil

The tax question has been adjusted with the understanding that Diesel oil sold to large vessels does not carry the Federal tax of 1 cent per gallon on sales of motor fuel to "motor boats," and refiners continue to bill their customers at the regular posted level of $1.65 per barrel, bulk at terminal, or $1.71½ per barrel f.a.s. within harbor limits.

Gas Oil

The local market for 28 gravity plus recycled gas oils remains unchanged at 3¾ to 4 cents per gallon, the latter figure being the posted price, and business was along routine lines throughout the week. The present price level on the eastern seaboard is sufficiently high to make California gas oil at 70 cents per barrel attractive to independent distributors in this area, and considerable of the Pacific Coast product has been booked for shipment East during the fall and winter months for delivery against fuel oil contracts. Gas oil at the Gulf, at a minimum of 3 cents per gallon, is not attractive to buyers here.

Furnace oil distributors have booked an exceptionally heavy volume of business with domestic consumers for delivery during the coming winter months. Distributors, is is reported, have not fully covered their committments in the open market, and considerable jobbing business is expected to develop in consequence during the closing quarter of the year. Despite the higher market for heavy oil this year, many furnace oil distributors have booked domestic heating oil contracts for the 1932-33 season at the same price levels which prevailed last year.

Lubs

Demand for cylinder oils had eased off considerably locally during the week, and prices were again lower on all grades. Spot prices quoted by principal sellers, in barrels, f.a.s. New York, were as follows: 600 filtered, 27½ to 28 cents per gallon; 600 Warren E, 23½ to 24 cents; 600 steam refined, unfiltered, 20 to 22 cents; 650 steam refined, unfiltered, 23 to 25 cents; 600 flash, steam refined, 24 to 25 cents; 630 flash, steam refined, 29 to 30 cents; bright stock, No. 8 color, 31 to 33 cents, bright stock, No. 6½ color, 29 to 31 cents.

Red and pale oils continued rather sluggish on all grades during the week, and tank car shipments continued rather light. Consuming manufacturers are still covered on their immediate requirements, in many instances, and seasonal slackness in various consuming industries has tended to slow down spot buying in other cases.

Retail lub oil markets are still considerably upset by price cutting, with unknown brands of "100 per cent Pennsylvania oils" freely offered at 15 cents per quart and less, as contrasted with the established retail market of 25 to 35 cents per quart for leading brands of crankcase oils.

Paraffin Wax

Domestic demand was again along quiet lines throughout the week, and the market remained unchanged at recently lowered quotations. The limited demand reaching sellers was principally for the higher melting points.

A little more export interest had developed, and sellers were considering bids on both crude scale and fully refined grades for shipment abroad. Most of the foreign inquiry, however, was confined to relatively small quantities, for prompt and nearby shipment, no large-lot business making its appearance.

Gulf Export Market

The outstanding development of the export market during the week was the reported sale of a cargo of 9,000 tons of East Texas crude, for August shipment to France, at $1.11 per barrel, f.o.b. Gulf loading terminal. Continued quiet was reported in Mexican and Venezuelan crudes, with Panuco heavy held at 46 cents per barrel, plus taxes, while Venezuelan crude was quoted at 60 to 65 cents per barrel, according to gravity and seller.

No business in either gasoline or kerosene developed in the domestic Gulf market during the week, and prices were nominally unchanged on all grades. Considerable export volume is reported from Caribbean refineries, however, with the bulk of the movement confined to intercompany shipments.

Continued firmness was reported in the Rumanian export market. Export quotations, f.o.b. Constanza, as of July 14 were reported by mail as follows: Gasoline, 730 gravity, $16.40 per ton, unchanged; heavy gasoline, $12.27 per ton, unchanged; lamp oil, $7 per ton, up 8 cents; white spirit, first grade, $10.44 per ton, unchanged; second grade, $8.38 per ton, unchanged; gas oil, $6.44 per ton, up 48 cents for the week; fuel oil, unchanged at $3.58 per ton. Considerable quantities of Rumanian gasoline were moving to France, this accounting in some measure for the continued dullness in the gasoline export market at the U. S. Gulf.

Petroleum Exports

There was a general slackening in export movement of refined products reported locally, following the heavy shipments of the previous week. Inquiries for nearby shipment were generally of but limited amount, and the outlook indicates continued quiet for the nearby positions.

The following table shows exports of principal refined petroleum products from the port of New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	July 23	July 16	July 9
Gasoline	95,000	755,000	20,000
Naphtha	295,000	2,450,000	8,000
Kerosene	28,000	28,000	4,000
Fuel and gas oil	204,000	24,000	220,000
Lubricating oil	560,000	797,000	3,920,000
Petroleum, ref.	152,000	230,000	20,000
	Pounds		
Petrolatum	8,000	.....	.....
Paraffin wax	1,015,000	1,025,000	1,030,000
Refined	160,000	.....	.....
Scale	64,000	53,000	30,000
Lub. grease	585,000	355,000	575,000

Imports

Imports of crude and refined petroleum at the principal United States ports during the week ended July 23 totaled 716,000 bbls., a daily average of 102,286 bbls., compared with 744,000 bbls., a daily average of 106,286 bbls. for the previous week and a daily average of 108,786 bbls. for the four weeks ended July 23. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports:	
Boston	67,000
New York	402,000
Philadelphia	247,000
Total	716,000
Daily average	102,286
At Gulf Coast ports:	
All ports	None
At all United States ports:	
Total	716,000
Daily average	102,286
Daily average four weeks	106,286

Classification of the week's imports was as follows:

Crude	329,000
Fuel oil	387,000

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic and Gulf Coast ports during the week ended July 23 totaled 190,000 bbls., a daily average of 27,143 bbls., compared with 565,000 bbls., a daily average of 80,714 bbls. for the previous week, and a daily average of 50,893 bbls. for the four weeks ended July 23. The week's receipts, entirely of gasoline, were all at New York.

CHEMICAL SHOW

The Fourteenth Exposition of Chemical Industries, the next Chemical Show, will be held in New York during the week of February 27 to March 4, 1933. Grand Central Palace will again be the location and three entire floors will be devoted to the exhibits showing the newest developments in raw materials, machinery and manufactured products. Already, at this early date, more than 179 companies have received space. The exhibitors represent over 40 American industries which are classified as chemical.

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21.

Gasolines

	Aug. 2		July 26	
OKLAHOMA (Group 3)—				
*U. S. Motor	.04½	.04¾	.04½	.05
60-62 400	.04⅝	.05	.04⅝	.05
64-66 390	.04¾	.05⅛	.04¾	.05⅛
64-66 375	.04¾	.05⅛	.04¾	.05⅛
68-70 350	.04⅞	.05¼	.04⅞	.05¼
NORTH TEXAS—				
*U. S. Motor	.04⅜	.04½	.04⅜	.04½
60-62 400	.04½	.04⅝	.04½	.04⅝
64-66 390	.04⅝	.04¾	.04⅝	.04¾
64-66 375	.04¾	.05	.04¾	.05
64-66 360	.04⅞	.05⅛	.04⅞	.05⅛
†NORTH LOUISIANA—				
*U. S. Motor	.05		.05¼	
60-62 400	.05¼		.05⅜	
†ARKANSAS—				
*U. S. Motor	.05		.05¼	
CHICAGO Based on Okla. (Group 3)—				
*U. S. Motor	.04⅜	.04⅝	.04½	.04⅝
60-62 400	.04½	.04⅝	.04½	.04¾
64-66 375	.04⅝	.04⅞	.04¾	.05
Aviation fighting grade	.05	.05¼	.05	.05½
68-70 360	.04⅞	.05	.04⅞	.05

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. On August 2, in the case of the U. S. Motor and 60-62 400 endpoint grades, where an octane rating of 57-65, inclusive, is guaranteed, prices are three-eighths cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are five-eighths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotations shown in above tables.

Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octan ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.06¾	.07	.06¾	.07
60-62 400	.06⅞	.07	.06⅞	.07
64-66 375	.07	.07⅛	.07	.07⅛
68-70 350	.07¼	.07¼	.07⅛	.07¼

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas:

CALIFORNIA (domestic movement only)—				
54-58 U. S. Motor	.06	.07¼	.06¼	.07¼
58-60 400	.06¾	.07¾	.06¾	.07¾
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.08	.08¼	.08	.08¼
Boston	.08¼		.08¼	.08½
Baltimore, Md.	.08¼		.08¼	
Charleston, S. C.	.07¾	.08¼	.07¾	.08¼
U. S. Motor, 65 octane and above:				
New York (Bayonne)	.08½	.08¾	.08½	.08¾
Boston	.08¾		.08¾	
Baltimore, Md.	.08¾		.08½	.08¾
Charleston, S. C.	.08½	.08¾	.08½	.08¾
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05½	.05¾	.05½	.05¾
U. S. Motor, below 65 octane number	.05¼	.05½	.05¼	.05½

Naphthas

	Aug. 2		July 26	
OKLAHOMA (Group 3)—				
50-52 450 (blending)	.04½	.04⅝	.04½	.04⅝
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.06½	.06¾	.06½	.06¾
ARKANSAS—				
48-50 450 (blending)	.05	.05⅛	.05	.05⅛
CHICAGO Based on Okla. (Group 3)—				
50-52 450 (blending)	.04⅝	.04⅝	.04½	.04¾
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06¼	.06½	.06¼	.06½
Lacquer diluent, 180 i.b.p.-250 e.p.	.08⅝	.08⅝	.08½	.08¾
Lacquer diluent, 140 i.b.p.-200 e.p.	.09		.09	.09½
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06¼	.06½	.06¼	.06½
Stoddard solvent, 300 i.b.p.-410 e.p. over 100° flash	.05½	.05¾	.05½	.05¾
Pet. thinner, 290, 300 i.b.p., 415 e.p., over 83° flash	.05	.05¼	.05	.05¼
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06	.06¼	.06	.06¼
Petroleum spirits	.04⅛	.05¼	.04⅛	.05¼

Natural Gasolines

	Aug. 2		July 26	
OKLAHOMA (Group 3)—				
Grade 18-55	.02¾	.02⅞	.02½	
Grade 26-70	.02¼	.02⅜	.02⅛	
Grade 30-70	.02⅛		.01⅞	.02
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.03⅛		.02⅞	.03
11 lb. v.p. (max.)	.04		.03¾	.03⅞
NORTH TEXAS—				
Grade 18-55	.02¾		.02½	
Grade 26-70	.02¼	.02⅜	.02⅛	
Grade 30-70	.02⅛		.01⅞	.02
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.03	.03⅛	.02⅞	
11 lb. v.p. (max.)	.03⅞	.04	.03¾	
NORTH LOUISIANA—				
Grade 26-70	.02½		.02⅜	
CALIFORNIA—				
75-78 375	.04¼	.05¼	.04¼	.05¼

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of America effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A, Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

*All grades have minimum recovery of 96 (natural gasoline method).

Kerosenes

(All kerosenes water white)

	Aug. 2		July 26	
OKLAHOMA (Group 3)—				
41-43	.02¾	.02⅞	.02¾	.02⅞
42-44	.02⅞	.03⅛	.02⅞	.03⅛
NORTH TEXAS—				
40-41	.02½		.02⅝	
41-43	.02⅝	.02¾	.02⅝	.02¾
†NORTH LOUISIANA—				
41-43	.03½		.03¼	
42-44	.03¾		.03½	
†ARKANSAS—				
41-43	.03½		.03¼	
PENNSYLVANIA (inland refineries)—				
45	.04⅝	.04¾	.04⅝	.04¾
46	.04¾	.04⅞	.04¾	.04⅞
47	.04⅞	.05⅛	.04⅞	.05⅛
CHICAGO (Based on Group 3)—				
41-43	.02⅝	.02⅞	.02¾	.03
42-44	.02⅞	.03	.02⅞	.03
*CALIFORNIA—				
38-40 high burning test	.04	.05	.04	.05
NEW YORK (Bayonne, N. J.)—				
41-43	.05½	.06	.05½	.06
GULF COAST (domestic)—				
41-43 water white	.04¼	.04½	.04¼	.04½

*For Pacific Coast consumption.

†For Arkansas, Louisiana and Mississippi delivery.

Tractor Fuels*

	Aug. 2		July 26	
OKLAHOMA (Group 3)—				
39-40 prime white	.02¼		.02⅛	.02¼
38-40 light straw	.02⅛		.02⅛	
NORTH TEXAS—				
38-40 light straw	.02⅛	.02¼	.02⅛	.02¼
CHICAGO (Based on Group 3)—				
38-40 light straw	.02¼	.02⅜	.02⅛	.02¼
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.03¾	.04	.03¾	.04

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 375° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

Furnace Oils*

	Aug. 2		July 26	
OKLAHOMA (Group 3)—				
32-36 straw	.01⅞	.02	.01¾	.01⅞
36-38 straw	.02	.02⅛	.01⅞	.02
38-40 straw	.02⅛		.02	.02⅛
39-41	.02¼		.02⅛	.02¼
NORTH TEXAS—				
38-40 straw	.02	.02⅛	.02	
†NORTH LOUISIANA—				
36-40	.02½		.02⅜	.02½
†ARKANSAS—				
32-36	.02¼	.02½	.02¼	.02½
CHICAGO (Based on Group 3)—				
32-36 straw	.02	.02⅛	.01⅞	.02
38-40 straw	.02⅛	.02¼	.02	.02⅛
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03¼	.03½	.03¼	.03½
NEW YORK (Bayonne, N. J.)—				
32-36	.04½		.04½	
36-40	.04½		.04½	
21 (industrial)	.04		.04	

*Above prices are for furnace oils of zero cold test under 190° F. flash and good odor.

†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

	Aug. 2		July 26	
OKLAHOMA (Group 3)—				
32-36 (G.O.) cracking stock	.01⅜	.01½	.01⅜	.01½
U.G.I. (G.O.)	.01¼	.01⅜	.01¼	.01⅜
32-36, zero to 15 (G.O.) high flash	.01½	.01⅝	.01½	.01⅝
28-30, zero to 10	.50	.55	.50	.55
26-30, zero to 10	.50		.50	
24-26	.42½	.45	.42½	.45
20-22	.40	.45	.40	.45
16-20	.37½	.40	.35	.40
Below 16	.35	.37½	.32½	.35
NORTH TEXAS—				
32-36 (G.O.) industrial	.01¼	.01⅜	.01¼	.01⅜
22-26	.45	.50	.45	.50
Below 20	.30	.35	.30	.35
NORTH TEXAS—				
32-36 (G.O.) zero	.02		.02	
14-16	.35	.40	.35	.40
†ARKANSAS—				
32-36 (G.O.) zero	.02		.02	
14-16	.35	.40	.32½	.35
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.01¼	.01½	.01¼	.01½
28-30 (zero)	.55	.60	.55	.60
22-26	.40	.45	.40	.45
18-22	.27½	.32½	.25	.30
Below 18	.25	.30	.22½	.27½
PENNSYLVANIA (inland refineries)—				
36-40	.03	.03¼	.03	.03¼

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.70	.85	.70	.85
27 plus Diesel	.70	.85	.70	.85
15-19 Bunker (at tidewater)	.55	.75	.55	.75
15-19 Bunker (cargo lots)	.50	.65	.50	.65
15-19 Bunker (tank car)	.45	.65	.45	.65
GULF COAST—				
28-30 (G.O.)	.03	.03⅛	.03	.03⅛
28-30 Diesel	1.50		1.50	
Bunker C (bulk cargoes)	.55	.60	.55	.60
Bunker C (bunkers)	.70		.70	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.65		1.65	
26-32 Diesel (tank cars)	.04		.04	
†Bunker C	.85		.85	

*Lighterage 6½ cents per barrel.

†Lighterage 5 cents per barrel.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

Breeze (screenings)	3.50	3.75	3.50	3.75
Still runs	3.75	4.00	3.75	4.00
Lump and egg	5.00	5.50	5.00	5.50

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

	Aug. 2		July 26	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09¼	.09½	.09¼	.09½
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¾	.10½	.10¼	.10½
300-3.5	.11⅞	.12	.11⅞	.12
350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13

500-4.5	.13¼	.13½	.13¼	.13½
100-2 Paraffin Oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07⅞	.08	.07⅞	.08
200-4	.07½	.07¾	.07½	.07¾
240-3	.09¼	.09½	.09¼	.09½
240-4	.08¾	.09	.08¾	.09
280-3	.10⅜	.11	.10⅜	.11
280-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.15	.16	.15	.16
10 pour test	.14	.15	.14	.15
15 pour test	.13½	.14½	.13½	.14½
25 pour test	.12¾	.13¼	.12¾	.13¼
30 pour test	.12¾	.13	.12¾	.13
180 vis., No. 3, 25 pour test	.15½	.16	.15½	.16
200 vis., No. 3:				
Zero pour test	.22	.23	.22	.23½
10 pour test	.21	.22	.21	.22
15 pour test	.19½	.20	.19½	.20
25 pour test	.17	.17¼	.17	.17¼
30 pour test	.17		.17	
GULF COAST—				
Pale Oils:				
100-2-2½	.05		.05	
200-3	.06½		06½	
300-3	.07		.07	
500-3½	.08	.08½	.08	.08½
750-3½	.09	.09½	.09	.09½
1,200-3½	.10½	.11	.10½	.11
2,000-4	.12	.12½	.12	.12½
Red Oils:				
200-5-6	.05	.05½	.05	.05½
300-5-6	.05½	.06	.05½	.06
500-5-6	.06¾	.07	.06¾	.07
1,200-5-6	.09½	.10	.09½	.10
2,000-6 plus	.11	.11½	.11	.11½
CALIFORNIA—				
Pale Oils:				
100-2½-3	.07¾	.08	.07¾	.08
200-2½-3	.07¾	.08	.07¾	.08
300-3-3½	.08¼	.08½	.08¼	.08½
350-3-4	.08¾	.09	.08¾	.09
400-3-4	.09¼	.09¾	.09¼	.09¾
450-3-4	.09¾	.10	.09¾	.10
550-3-4	.10¼	.11	.10¼	.11
Red Oils:				
200-4½-5	.07	.07¼	.07	.07¼

300-5-6	.07½	.07¾	.07½	.07¾
350-5-6	.07¾	.08	.07¾	.08
400-5-6	.08	.08¼	.08	.08¼
450-5-6	.08¼	.08½	.08¼	.08½
500-5-6	.08½	.08¾	.08½	.08¾
600-5-6½	.08¾	.09	.08¾	.09
700-6½ plus	.09	.09½	.09	.09¼
750-6½ plus	.09	.09½	.09	.09½
900-6½ plus	.12	.13½	.12	.13½
NEW YORK (Bayonne, N. J.)—				
Paraffin Oil:				
25 pale	.10¼		.10¼	
28 pale	.07¼		.07¼	
280 red	.12½		.12½	
250 red	.11½		.11½	
225 red	.10		.10	
200 red	.09¼		.09¼	

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Aug. 2		July 26	
630 light green	.07¾	.08	.07¾	.08
600 light green S.R.	.05	.06	.05	.06
600 dark green S.R.	.04	.04½	.04	.04½
Bright Stock:				
190-200 D	.23		.23	
150-160 D, 0-10	.22		.22	
150-160 D, 10-25	.21½		.21½	
150-160 D, 25-40	.21		.21	
150-160 E	.21		.21	
PENNSYLVANIA—				
600 S.R.	.14	.15	.14	.15
650 S.R.	.17	.17½	.17	.17½
600 Pennsylvania flash	.18	.18½	.18	.18½
600 D filtered	.22½	.23	.22½	.23
600 E filtered	.16¾	.17	.16¾	.17
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis.				
210-540-550 flash:				
10 pour test	.28	.30	.28	.30
15 pour test	.27	.27½	.27	.27½
25 pour test	.26	.26½	.26	.26½
35 pour test	.26		.26	

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Aug. 2		July 26	
124-126 white crude scale	.01⅝	.01¾	.01⅝	.01¾
PENNSYLVANIA—				
122-124	.01⅞		.01⅞	
124-126	.02		.02	
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02⅜		.02⅜	
125-127	.02⅞		.02⅞	
130-132	.03¼		.03¼	
133-135	.04		.04	
135-137	.04⅛		.04⅛	
Petrolatum in barrels in carload lots:				
Dark green	.01⅜		.01⅜	
Amber	.02½		.02½	
Extra amber	.02½		.02½	
Cream	.04⅝		.04⅝	
Lily white	.05½		.05½	
Snow white	.06½		.06½	

Export Prices

GASOLINE

GULF COAST—	Aug. 2		July 26	
U. S. Motor	.04½		.04½	
60-62 400	.04⅝		.04⅝	
61-63 390	.04¾		.04¾	
64-66 375	.05		.05	
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55, 437 e.p.	.03¾	.04¼	.03¾	.04¼
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05¼		.05¼	
U. S. Motor, 69 octane num.	.05½		.05½	
58-60 400 endpoint gasoline	.04¼	.05	.04¼	.05

KEROSENE

GULF COAST—				
41-43 prime white	.04⅜		.04⅜	
41 water white	.04½		.04½	
LOS ANGELES, CALIF.—				
41-43 water white	.04	.05	.04	.05

LUBRICANTS

NEW YORK (Bayonne, N. J.)—				
600, steam refined cylinder stocks, in bbls.	.21	.22	.21	.22
650, steam refined	.24	.25	.24	.25
600, Pennsylvania flash	.24½	.25	.24½	.25
630, Pennsylvania flash	.29	.30	.29	.30
600, Warren E	.23½	.24	.23½	.24
600, Oil City E	.22½	.23	.22½	.23
Light 140-150 Bright Stocks	.32	.33	.32	.33
Dark 140-150 Bright Stocks	.30	.31	.30	.31

Crude Oil Prices

Oklahoma, Kansas, North and East Central Texas

East Texas (Apr. 1, 1932)† ..... $ .93
East Texas (April 11, 1932)‡ ..... .98
Corsicana heavy* ..... .44
Other fields ..... See gravity table

†Posted by Magnolia Petroleum Co., Sinclair Refining Co., Panola Pipe Line Co., Tidal Refining Co. and The Texas Company. ‡Gulf Pipe Line Co. and Atlas Pipe Line Co. *Magnolia Petroleum Co.

Eastern States

JOSEPH SEEP PURCHASING AGENCY
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) (Mar. 14, 1932) $2.02
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.75
Penna Grade Oil in Eureka Pipe Line Lines (West Virginia) (Feb. 26, 1932) 1.70
Penna Grade Oil in Buckeye Pipe Line Lines (Mar. 12, 1932) 1.55
Corning Grade Oil in Buckeye Pipe Line Co.'s line (Apr. 26, 1932) 1.05
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931) ... .60

PENNZOIL CO.
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines:
Group A $1.97
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B 1.96
Includes Titusville district.
Group C 1.95
Includes Turkey and Tidiout districts.
Group D 1.94
Includes Bear Creek and Porkey districts.
Group E 1.92
Includes Eldereau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinsua districts.
Price depends on length of pipe line haul to plant at Oil City.

TIDE WATER PIPE CO.
(Effective April 25, 1932)

Bradford, Pa. $2.02
Allegany, N. Y. 2.02

PURE OIL CO.
(Effective April 25, 1932)

Cabin Creek, W. Va. $1.70
Bradford Hollow, W. Va. 1.70
Kelly's Creek, W. Va. 1.70

Texas Panhandle

Gray County, Wheeler County and Carson-Hutchinson Counties ..... See gravity table

Rocky Mountain States

OHIO OIL CO.-MIDWEST REFINING CO.
Ilea, light (Aug. 24, 1931) ..... $ .75
Ilea, heavy (Aug. 24, 1931) ..... .53
Fort Collins (April 11, 1932) ..... .86
Florence (April 11, 1932) ..... .80
Wellington (April 11, 1932) ..... .76
Greasewood Dome, Colo. (Apr. 11, 1932) 1.00
Dutton Creek (Apr. 11, 1932) ..... .82
Rock Creek, Wyo. (June 1, 1932) ..... .90
Frannie, light (Nov. 3, 1931) ..... .61
Frannie, heavy (Nov. 3, 1931) ..... .51
Salt Creek ..... Mid-Continent gravity table
LaBarge ..... Mid-Continent gravity scale
Big Muddy (Apr. 11, 1932) ..... .98
Grass Creek (June 1, 1932) 1.10
Elk Basin (June 1, 1932) 1.10
Lance Creek (Apr. 11, 1932) 1.15
Poison Spider (Mar. 5, 1931) ..... .70
Notches (Mar. 14, 1927) ..... .65
Hudson (June 2, 1931) ..... .65
Lander (Mar. 5, 1931) ..... .40
Rex Lake (Feb. 22, 1930) 1.10
Osage (Apr. 15, 1931) ..... .98
Lost Soldier (Apr. 12, 1932) ..... .80
Hamilton Dome (Nov. 3, 1931) ..... .45
Greybull (Apr. 11, 1932) 1.20
Cat Creek (Apr. 11, 1932) 1.20
Pondera (Nov. 3, 1931) ..... .90
Sunburst, Mont. (Apr. 11, 1932) 1.05
Hogback, N. Mex. (Aug. 24, 1931) ..... .80
Border, Mont. 1.55
Red Coulee, Alberta 1.55
Lea County, N. Mex. (Apr. 1, 1932)* .. .65
Maljamar (Apr. 11, 1932) ..... .60
Artesia-Jackson (Apr. 11, 1932) ..... .65

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Ilea by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.
*Posted by The Texas Company. Humble Oil & Refining Co. met this price effective April 11.

West Texas

Iatan and Westbrook .. Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties* ..... $ .65
Lea County, N. Mex. (See Rocky Mountain States.)
Toborg, Pecos County (Apr. 11, 1932)†.. .55

*Effective April 1, 1932, Magnolia Petroleum Co., The Texas Company. Effective April 11, Humble Oil & Refining Co. and Gulf Pipe Line Co. and Stanolind Oil & Gas Co. in Winkler County. †Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B classifications discontinued by leading buyers ..... See gravity table
Jennings, La. (Apr. 11, 1932)* ..... $ .75
Lockport, La. .. See Gulf Coast gravity table
Refugio, light ..... See gravity table
Refugio, heavy (Apr. 11, 1932)‡ ..... .80
Markham (Apr. 11, 1932)§ ..... See Gulf Coast gravity schedule
High Island (Apr. 11, 1932)¶ ..... See Gulf Coast gravity schedule

*Gulf Refining Co. †Magnolia Petroleum

(Continued on Next Page)

Crude Oil Gravity Table

	Kansas and Oklahoma	North and Central Texas	East Central Texas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Salt Creek and LaBarge, Wyoming	North Louisiana and Arkansas	Gulf Coast (Texas-Louisiana)	Cameron, Meadows, Louisiana	Iowa and Lockport, Louisiana
	1	2	3	4	5	6	7	8	9	10
Below 25 degrees	....	....	$.67	....	....	....	$.68	$.80	$.70	$.80
25-25.9 degrees	....	....	.67	....	....	....	.70	.81	.71	.81
26-26.9 degrees	....	....	.67	....	....	....	.72	.82	.73	.82
27-27.9 degrees	....	....	.67	....	....	....	.74	.83	.73	.83
28-28.9 degrees	....	....	.76	....	....	....	.76	.84	.74	.84
Below 29 degrees	$.76	$.76	....	....	....	$.76	....	....	....	....
29-29.9 degrees	.78	.78	.78	....	....	.78	.78	.85	.75	.85
30-30.9 degrees	.80	.80	.80	....	....	.80	.80	.86	.76	.86
31-31.9 degrees	.82	.82	.82	....	....	.82	.82	.87	.77	.87
32-32.9 degrees	.84	.84	.84	....	....	.84	.84	.88	.78	.88
33-33.9 degrees	.86	.86	.86	....	....	.86	.86	.89	.79	.89
34-34.9 degrees	.88	.88	.88	$.76	$.66	.88	.88	.90	.80	.90
35-35.9 degrees	.90	.90	.90	.78	.68	.90	.90	.91	.81	.91
36-36.9 degrees	.92	.92	.92	.80	.70	.92	.92	.92	.82	.92
37-37.9 degrees	.94	.94	.94	.82	.72	.94	.94	.94	.84	.94
38-38.9 degrees	.96	.96	.96	.84	.74	.94	.96	.96	.86	.96
39-39.9 degrees	.98	.98	.98	.86	.76	.94	.98	.98	.88	.98
40 degrees and over	1.00	1.00	1.00	.88	.78	.94	1.00	1.00	.90	1.00

Note—Magnolia Petroleum Co.'s prices in Oklahoma, North Texas and Central Texas, effective April 1, are the same as above given in Columns 1 and 2, excepting that the schedule begins with below 28 degrees, 67 cents; 28-28.9 degrees, 76 cents. The Empire Pipe Line Co. met the Magnolia prices in Kansas and Oklahoma; the White Eagle Oil Corp. in Kansas and the Pure Oil Co., in Oklahoma.

Column 1—Effective April 1, 1932, Continental Oil Co. in Oklahoma and Kansas; Barnsdall Refineries, Inc., and Standish Oil Co. (Phillips Petroleum Co.), in Oklahoma and Kansas; Skelly Oil Co., Kanotex Refining Co., Derby Oil Co., Vickers Petroleum Co., in Kansas; Magnolia Petroleum Co. and Pure Oil Co., in Oklahoma (see note above); White Eagle Oil Corp., in Kansas (see note above); The Texas Company in Oklahoma. Effective April 11, 1932, Stanolind Crude Oil Purchasing Co. in Oklahoma and Kansas; Gypsy Oil Co., Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co. and Carter Oil Co. in Oklahoma. Carter Oil Co.'s schedule begins at below 25 degrees, 68 cents, with 2 cents added for each degree upward.

Column 2—Continental Oil Co., effective April 1, in North Texas only; followed on same day by The Texas Company in North and Central Texas; Magnolia Petroleum Co. in North and Central Texas (see note above); effective April 11, the Humble Oil & Refining Co., Gulf Pipe Line Co. and Stanolind Crude Oil Purchasing Co.

Column 3—Effective April 1, 1932, the Magnolia Petroleum Co., effective April 11, 1932, Humble Oil & Refining Co.

Column 4—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, the Philtex Oil Co. (Phillips Petroleum Co.), but its schedule was carried down to below 30 degrees at 66 cents, with 2 cents added for each degree upward. Effective April 11, other companies met Continental schedule.

Column 5—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, Philtex Oil Co., excepting that latter company carried its schedule down to below 30 degrees at 56 cents, with 2 cents added for each degree upward. Effective April 11, Continental Oil Co. and Gulf Pipe Line Co. met Magnolia Petroleum Co. prices.

Column 6—Midwest Refining Co., effective April 11, 1932.

Column 7—The Texas Company, effective April 1, 1932; Magnolia Petroleum Co., effective April 6, 1932; Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Stanolind Oil & Gas Co. (in Pine Island and Pleasant Hill and in Marion County, Texas) and Gulf Refining Co., effective April 11, 1932.

Column 8—The Texas Company, effective April 1, 1932; Sun Oil Co., April 1, 1932; Humble Oil & Refining Co., effective April 11, 1932; Gulf Pipe Line Co., effective April 11, 1932. Gulf's gravity scale ends with a top of 35 and above at 91 cents. Humble Oil & Refining Co., effective July 18, 1932, posted following prices for Conroe crude: 35-35.9 degrees, 90 cents; 36-36.9 degrees, 92 cents; 37-37.9 degrees, 94 cents; 38-38.9 degrees, 96 cents; 39-39.9 degrees, 98 cents; 40 and above, $1.

Column 9—Magnolia Petroleum Co., effective April 6, 1932.

Column 10—Magnolia Petroleum Co., effective April 6, 1932.

(California Crude Oil Prices on Page 31)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

August 2, 1932

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Chicago	17.1	17.1	4.0	10.0
Decatur, Ill.	17.6	17.6	4.0	10.1
E. St. Louis	16.9	16.9	4.0	9.3
Joliet	17.6	17.6	4.0	10.1
Peoria	17.6	17.6	4.0	10.1
Quincy	17.4	17.4	4.0	9.9
Davenport, Ia.	17.7	17.7	4.0	10.4
Des Moines	17.7	17.7	4.0	10.4
Keokuk	17.7	17.7	4.0	10.4
Sioux City	17.3	17.3	4.0	10.0
Duluth, Minn.	18.7	18.7	4.0	11.0
Mankato	18.3	18.3	4.0	9.7
Minneapolis	18.4	18.4	4.0	11.0
LaCrosse, Wis.	19.4	19.4	5.0	11.1
Milwaukee	18.3	18.3	5.0	10.0
Madison	18.5	18.5	5.0	10.2
Detroit, Mich.	13.6	13.6	4.0	10.6
Grand Rapids	17.5	17.5	4.0	10.3
Saginaw	16.6	16.6	4.0	10.6
Evansville, Ind.	18.2	18.2	5.0	9.9
Indianapolis	18.4	18.4	5.0	10.1
South Bend	18.7	18.7	5.0	10.4
Fargo, N. D.	20.1	20.1	4.0	13.0
Huron, S. D.	19.5	19.5	5.0	11.3
Sioux Falls	19.0	19.0	5.0	11.5
K. C., Mo.*	15.1	15.1	4.0	8.7
Springfield*	17.1	17.1	4.0	8.0
St. Louis*	16.6	16.6	4.0	9.4
St. Joseph*	16.7	16.7	4.0	7.5
Wichita, Kans.	15.9	15.9	4.0	7.0
Bartlesville, Ok.	16.8	16.8	5.0	9.0

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

A third grade of gasoline, "Stanolind Blue," is sold at all major points at a price 1½ cents or more below the price on the regular grade shown above.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

Stanolind Furnace Oil in Chicago

Effective July 1, 1932, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), 150 gallons or more, 6 cents; No. 2 (30-34 stw. zero), 150 gallons or more, 5.50 cents; No. 3 (22-26 zero), 300 gallons or more 4.75 cents; No. 4 (12-16 zero), 400 gallons or more, 4 cents. Viscosity of No. 4, 90-115 at 100° F.

Fuel Oils

Chicago Oil Heat Institute Prices

Spot market prices on 350 gallons or over deliveries, and top prices on contracts, respectively: 38-40, 6 cents and 7½ cents; 32-36, 5½ cents and 7 cents; 28-30 4¾ and 6¼ cents; 24-26, 4¼ cents and 5¼ cents; 18-22, 4 cents and 5 cents. On deliveries of less than 350 gallons the spot price is one-half cent higher.

Southern District
STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atlanta, Ga.*	22.0	22.0	7.0	11.0
Augusta	21.0	21.0	7.0	13.5
Macon	22.0	22.0	7.0	13.0
Savannah	20.0	20.0	7.0	12.5
Birm'ham, Ala.	21.0	21.0	7.0	11.0
Mobile	20.0	20.0	7.0	10.0
Montgomery	22.5	22.5	7.0	13.5
Jackson, Miss.	20.0	20.0	7.0	12.0
Vicksburg	20.0	20.0	7.0	10.5
Jack'ville, Fla.	20.0	20.0	8.0	12.5
Miami	22.0	22.0	8.0	12.5
Pensacola	22.5	22.5	8.0	12.5
Tampa	21.0	21.0	8.0	10.0
Lexington, Ky.	18.5	18.5	6.0	10.5
Covington	19.0	19.0	6.0	10.5
Louisville	18.0	18.0	6.0	10.5
Paducah	19.5	19.5	6.0	8.0

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax. Dealers receive discount of 3 cents off tank wagon price throughout territory.

Rocky Mountain District
CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Denver, Colo.	18.0	21.0	5.0	12.5
Pueblo	18.0	21.0	5.0	12.5
Grand Jctn.	20.0	23.0	5.0	14.5
Casper, Wyo.	17.0	20.0	5.0	10.0
Cheyenne	18.0	21.0	5.0	11.5
Butte, Mont.	20.0	23.0	6.0	17.0
Billings	23.0	26.0	6.0	15.5
Great Falls	23.0	26.0	6.0	17.0
Helena	22.0	25.0	6.0	17.0
Salt Lake, Utah	19.0	22.0	5.0	16.0
Albu'que, N. M.	18.0	21.0	*7.0	14.0
Boise, Idaho	23.5	26.5	6.0	18.0
Twin Falls	22.5	25.5	6.0	18.0

*One-cent city tax.

Southwestern District
MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Dallas, Tex.	15.5	18.0	5.0	7.0
Fort Worth	16.5	18.0	5.0	9.0
Houston	15.5	18.0	5.0	10.0
San Antonio	15.5	18.0	5.0	9.0
El Paso	15.5	19.0	5.0	12.0
Texarkana	*19.5	*19.5	5.0	††11.0
Muskogee, Ok.	14.5	17.0	5.0	8.0
Okla. City	14.5	17.0	5.0	8.0
Tulsa	15.5	18.0	5.0	8.0
Ft. Smith, Ark.	*17.0	17.0	7.0	††9.0
Little Rock	*19.0	*19.0	7.0	††11.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

*Less 2½ cents to dealers. †Less 3 cents to dealers.

Pennsylvania-Delaware and Part of New England
ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Pittsburgh, Pa.	17.5	18.5	4.0	11.0
Philadelphia	16.5	17.5	4.0	11.0
Scranton	17.5	18.5	4.0	11.0
Allentown	17.5	18.5	4.0	11.0
Altoona	17.5	18.5	4.0	11.0
Erie	17.5	18.5	4.0	11.0
Dover, Del.	17.5	18.5	4.0	11.0
Wilmington	17.5	18.5	4.0	11.0
Springf'd, Mass.	17.5	18.5	4.0	8.0
Worcester	17.5	18.5	4.0	8.0
Boston	13.5	14.5	4.0	8.0
Providence, R.I.	12.5	13.5	3.0	8.0
Hartford, Conn.	16.5	17.5	3.0	8.0
New Haven	16.5	17.5	3.0	8.0

Nebraska
STANDARD OIL CO. (NEBRASKA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Omaha	16.9	17.9	5.0	10.25
McCook	19.0	19.0	5.0	11.75
Norfolk	18.75	18.75	5.0	10.75
N. Platte	19.0	19.0	5.0	11.5
Scottsbluff	19.0	19.0	5.0	11.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

Central South District
STANDARD OIL CO. (LOUISIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
N. Orleans, La.	19.0	19.0	*7.0	†9.0
Baton Rouge	18.0	18.0	6.0	†9.0
Alexandria	19.0	19.0	*7.0	†9.0
Lafayette	19.0	19.0	*7.0	†9.0
Lake Charles	19.0	19.0	*7.0	†9.0
Shreveport	18.0	18.0	6.0	†9.0
Knoxville, Tenn	22.0	22.0	8.0	11.5
Memphis	20.5	20.5	8.0	9.0
Chattanooga	22.0	22.0	8.0	11.5
Nashville	21.5	21.5	8.0	11.0
Bristol	22.5	22.5	8.0	12.0
Lt. Rock, Ark.	19.0	19.0	7.0	9.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Kerosene prices in Louisiana include 1-cent tax except New Orleans where tax is 2 cents.

Two-cent discount off gasoline and kerosene tank wagon price to dealer and commercial accounts.

Ohio
STANDARD OIL CO. (OHIO)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Ohio points	18.0	18.5	5.0	*12.0

Dealers and commercial accounts 2 cents under tank wagon.

*Service station price 13 cents.

Pacific Coast Territory
STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank truck†	Posted retail	Incl'ds tax	tank wagon
Fresno	19.5	18.5	4.0	17.0
San Francisco	19.0	18.0	4.0	15.5
Los Angeles	18.5	17.5	4.0	16.5
Reno, Nev.	25.0	24.0	5.0	19.0
Portland, Ore.	21.0	20.0	5.0	16.5
Seattle, Wash.	22.0	21.0	6.0	16.5
Tacoma	22.0	21.0	6.0	16.5
Spokane	25.5	24.5	6.0	20.5
Phoenix, Ariz.	19.5	21.5	6.0	20.5

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

*Retail prices posted by Standard Stations, Inc., a subsidiary.

Naphtha

	Tank wagon	Tank car
Oleum spirits	10.7	6.23
V.M.P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Atlantic Coast District
STANDARD OIL CO. (NEW JERSEY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atl'tic City, N.J.	16.9	17.9	4.0	11.2
Newark	16.2	17.2	4.0	8.5
Annapolis, Md.	18.5	19.5	5.0	10.0
Baltimore	17.9	18.9	5.0	7.0
Cumberland	19.4	20.4	5.0	11.7
Wash'g'n, D. C.	16.4	17.4	3.0	10.0
Danville, Va.	20.6	21.6	6.0	11.9
Norfolk	19.0	20.0	6.0	10.3
Petersburg	20.1	21.1	6.0	11.4
Richmond	19.4	20.4	6.0	10.7
Roanoke	20.6	21.6	6.0	11.9
Charles'n, W.Va.	19.3	20.3	5.0	11.6
Parkersburg	17.9	18.9	5.0	10.2
Wheeling	18.9	19.9	5.0	11.2
Charlotte, N. C.	22.2	23.2	7.0	12.5
Hickory	22.4	23.4	7.0	12.7
Mt. Airy	22.5	23.5	7.0	12.8
Raleigh	22.0	23.0	7.0	12.3
Salisbury	22.3	23.3	7.0	12.6
Charleston, S.C.	20.0	21.0	7.0	10.3
Columbia	21.9	22.9	7.0	12.2
Spartanburg	22.2	23.2	7.0	12.5

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and States of Maryland and New Jersey, where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

Prices shown above are for standard gasoline.

New York and Part of New England District
STANDARD OIL CO. (NEW YORK)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Albany, N. Y.	17.0	18.0	4.0	9.0
New York	14.5	14.5	4.0	9.5
Buffalo	17.5	18.5	4.0	9.0
Rochester	17.5	18.5	4.0	9.0
Syracuse	17.5	18.5	4.0	9.5
Boston, Mass	14.5	14.5	4.0	8.0
Augusta, Me.	18.0	19.0	4.0	9.0
Manch'tr, N. H.	17.5	18.5	5.0	8.0
Burlington, Vt.	18.5	19.5	5.0	8.5

TANK WAGON CHANGES

Standard Oil Co. of Louisiana reduced the kerosene price 2 cents at practically all points in its marketing territory on July 29.

Standard Oil Co. of Kentucky reduced the kerosene price one-half cent in Jackson, Miss., and 1 cent in Augusta and Savannah, Ga., in Miami and Pensacola, Fla., on July 27. On July 25 the kerosene price was reduced to 10 cents in Tampa, Fla. On July 29 the kerosene price was reduced 1 cent in Montgomery, Ala. On July 23 the gasoline tank wagon and station prices were reduced as shown in the accompanying table throughout the greater portion of the company's territory. On July 24 the gasoline tank wagon and station prices were reduced to 20 cents in Montgomery, Ala.

Atlantic Refining Co. reduced the gasoline tank wagon and station prices 1 cent in Boston and Fall River, Mass., and in Providence, R. I., on July 23.

SKELLY OIL INCOME

The Skelly Oil Co. and subsidiaries consolidated profit and loss account of the quarter ended June 30 reports a net income, after depletion, depreciation and other capital extinguishments, of $235,107.27 for the quarter, as compared with a net loss of $1,926,538.51 for the same quarter in 1931.

Crude Oil Prices

(Continued from Preceding Page)

Co. ‡Humble Oil & Refining Co. ‖The Texas Company. †Yount Lee Pipe Line Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$ .65
Urania, La. (Apr. 12, 1932)	.60
East El Dorado, Ark. (Apr. 6, 1932)	.65
Stephens, Ark., below 29° (Apr. 12, 1932)	.61
Stephens, Ark., 29° and above (Apr. 12, 1932)	.64
Other fields	See gravity table

Note—Smackover, all grades, The Texas Company, April 1, 1932; Magnolia Petroleum Co., April 6, 1932; Standard Oil Co. of Louisiana, Gulf Refining Co. and Louisiana Oil Refining Co., April 11, 1932. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.; East El Dorado by Magnolia Petroleum Co., effective April 6, 1932; by Gulf Refining Co., effective April 11, 1932; Stephens, Ark., by Louisiana Oil Refining Co. and Atlantic Oil Producing Co.

South Central and Southwest Texas

Darst Creek (Apr. 1, 1932)*	$ .76
Luling (Apr. 1, 1932)*	.64
Mirando (Apr. 1, 1932)*	.80
Pettus (Apr. 11, 1932)‡	1.00
Salt Flat (Apr. 11, 1932)‡	.75
Thrall‖	
Lytton Springs (Lockhart) (Apr. 1, 1932)*	.94
Dobrowolski‖	
Same as Mid-Continent gravity scale up to and including 38-38.9°	
Somerset‖	
Same as Mid-Continent gravity scale up to and including 38-38.9°	

*Magnolia Petroleum Co., The Texas Company, Humble Oil & Refining Co. posted 80 cents for Mirando, April 11. ‖Thrall prices same as North Central Texas less 19½ cents per cwt. freight. ¶Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products. †Pioneer Oil & Refining Co. ‡Humble Oil & Refining Co.

Middle Western States
OHIO OIL CO.
(Effective April 17, 1932)

Lima	$1.16
Wooster	1.35
Illinois	1.10
Indiana	.76
Princeton	1.10
Plymouth	Shut in
Western Kentucky	1.05
Midland, Mich. (July 13, 1932)*	.85
Muskegon (July 14, 1932)†	
Mid-Continent gravity scale	
Muskegon (June 30, 1932)‡	.95
Somerset, Ky. (Apr. 25, 1932)	.85
Hart County, Ky. (June 10, 1932)‖	1.00

*Posted by Pure Oil Co. Old Dutch Refining Co. pays 20 cents per barrel over Pure Oil Co.'s posted price. †Naph-Sal Refining Co. ‡Old Dutch Refining Co. ‖Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

Mexico

Panuco*	$ .47

*F.o.b. ship, based on May transactions and exclusive of production and export taxes and bar dues.

Canada

Ontario (Nov. 3, 1931):	
Petrolia*	$1.90
Oil Springs*	1.97
Alberta (Apr. 22, 1932):	
Turner Valley†:	
Crude oil 40-44.9	1.56
Crude oil 45-45.9	2.18
Crude oil 50 and above	2.30
Crude naphtha	3.32
Discolored naphtha	3.08

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

NEWS FOR SALES DEPARTMENTS

Two States Amend Gasoline Laws to Control Evasion

In an effort to check the depredations of the gasoline tax evader, the State of Louisiana has amended its gasoline tax law to give the policing powers of the State greater authority to stop evasion before it takes place. Among the provisions of the amended law is one forbidding the delivery of gasoline between the hours of 9 p.m. and 5 a.m. Such delivery is construed as prima facie evidence of attempted evasion. In cases of emergency where such delivery is necessary, both parties to the transaction are required to report it to the supervisor of public accounts within 96 hours.

All gasoline transported within the State must be done under bond and the vehicle must carry complete identification of the carrier as well as invoices showing origin, consignee and gallonage. Right of search and seizure is also specifically included in cases where it is suspected that gasoline on which the tax has not been paid is being stored or transported within the State. Common carriers transporting gasoline into or within the State are required to make full reports within 15 days of the end of each month. Penalties for violation of the amended law may run as high as $1,000 fine, two years in jail, or both.

The new gasoline law in Virginia, designed along somewhat similar lines, and drawn up with the idea of preventing evasion of payment of this tax, went into effect July 1. This law also requires both common and private carriers to carry complete identification of both vehicle and load at all times specifying the forms for these identifications, and requires common carriers to make monthly reports. Another provision of this law prohibits the delivery of gasoline from a tank truck to the fuel tank of a motor vehicle except in cases of emergency. Heavy penalties are exacted for violations of the various provisions of this new law also.

Gasoline and Oils Consumed on Ships Subject to Taxes

WASHINGTON, D. C., July 30.—A reply to a letter received by the Bureau of Internal Revenue applies equally to rules governing the exportation of petroleum and products. In this case the Bureau writes as follows:

"Receipt is acknowledged of your letter in which you request a ruling as to whether sales of articles for consumption on shipboard en route to foreign countries may properly be considered as sales for export and, as such, exempt from the taxes imposed by the Revenue Act of 1932 on certain articles sold in this country by the manufacturer, producer or importer.

"In order to be exempt from tax as a sale for export it is necessary that two conditions be met, namely, (1) that the article be sold for export and (2) that it be exported in due course.

"Sales of articles for consumption on shipboard en route to foreign countries do not meet these tests. Sales for export contemplate that the article sold shall reach the foreign destination or, at least, be shipped with that intention. Obviously, articles sold for consumption while en route to a foreign country have no foreign destination. Consequently, sales for this purpose are not exempt from the taxes imposed on the sale of taxable articles under the Revenue Act of 1932. It is immaterial, in this respect, whether the ship be of American or of foreign registry."—C. E. K.

Official Report Shows Decrease in Oil Used by Wood-Preserving Industry

The quantity of petroleum used by the wood-preserving industry during 1931 amounted to 434,716 bbls., which represented a decrease of 234,339 bbls., or 35 per cent, from the consumption of 669,055 bbls. during 1930 and a decline of 271,384 bbls., or 38 per cent, from the demand during 1929, the peak year, when 706,100 bbls. was used. In as much as the total material treated by the wood-preserving industry during 1931 was 30 per cent less than in 1930, it is indicated that the lowered use of petroleum resulted from decreased activity within the industry rather than from the increased use of other preservatives.

Petroleum is used by the wood-preserving industry as a diluent in mixture with creosote and water-gas tar and is employed mainly in the treatment of crossties, as crossties comprised 90 per cent of the material treated with mixtures of petroleum and creosote or water-gas tar. Of all crossties treated by the industry during 1931, 25 per cent were preserved with mixtures in which petroleum was used.

Of all material treated, 73.3 per cent were given preservative treatment with creosote; 17.5 per cent with petroleum-creosote mixtures; 5.7 per cent with zinc chloride; 2.3 per cent with zinc-creosote mixtures, and 1.2 per cent with miscellaneous salts and liquids.

The quantity of petroleum used by the wood-preserving industry during the past eight years is shown in the following table:

Year—	Crossties	Construction timbers	Switchties	Other material	Total
1924	22,292,520	1,834,141	.....	170,548	24,297,209
1925	27,688,797	452,773	1,102,914	199,715	29,444,199
1926	28,129,140	1,605,562	2,149,398	235,495	32,119,595
1927	47,373,441	824,242	3,023,531	511,055	51,732,269
1928	53,157,537	2,140,589	2,367,658	631,857	58,297,641
1929	55,547,314	2,271,515	3,195,614	810,607	61,824,950
1930	49,076,679	1,472,745	3,784,609	1,081,037	54,415,070
1931	36,611,991	1,952,149	1,725,536	424,311	40,713,977

Year—	Bbls.
1924	266,175
1925	310,680
1926	317,072
1927	545,503
1928	597,045
1929	706,100
1930	669,055
1931	434,716

The Interior Western district, with 28 plants located in Montana, Wyoming, Utah, Idaho, Colorado, Arizona and New Mexico, was the principal consuming region during 1931 and 1930, using 157,999 bbls. in the former year and 185,473 bbls. in the latter. The Southern Coast region, with 65 plants located in Kentucky, North Carolina, South Carolina, Tennessee, Georgia, Alabama, Florida, Mississippi, Louisiana, Texas, Arkansas and Oklahoma, was an important consuming region during 1930, when 184,115 bbls. was used, but the demand dropped to 31,269 bbls. during 1931.

The Interior Eastern district, with 54 plants located in Kansas, Ohio, Michigan, Indiana, Illinois, Wisconsin, Missouri and Minnesota, was the only region to register an increased use during 1931, when 123,998 bbls. was used, as compared with 91,074 bbls. during 1930. The Pacific Coast district, with 27 plants located in Washington, Oregon and California, registered a decline of approximately 50 per cent, using 82,341 bbls. in 1931 as compared with 160,766 bbls. in 1930. The Atlantic Coast region, with 42 plants located in Maine, Massachusetts, New Hampshire, Connecticut, New York, Pennsylvania, New Jersey, Delaware, Maryland, Virginia and West Virginia, used 39,109 bbls. in 1931, as compared with 47,627 bbls. in 1930.

Nine-tenths of the material treated with creosote-petroleum and other similar mixtures consists of crossties, with construction timbers, switchties, piles, poles, woodblocks, crossarms, and miscellaneous materials comprising the remaining one-tenth. The material treated with petroleum mixtures during the past eight years is shown, in cubic feet, in the following table:

During 1931, 204 wood-preserving plants were in active operation, four less than the number reported for 1930. Of these, four were new plants built during the year. Twelve plants were shut down during the year. Of the 204 active plants, 134 were of the pressure cylinder type, 53 were of the nonpressure, or open tank, type, and 17 were equipped for both pressure and nonpressure treatment. A list of wood-preserving plants, giving the name, location and equipment may be obtained from the United States Forest Service, Washington, D. C., which has cooperated for a number of years with the American Wood-Preservers' Association in compiling annual statistics of the wood-preserving industry. The 1931 report, by R. K. Helphenstine, Jr., has just been issued.

EXEMPT FROM FEDERAL TAX

The attorney general of Indiana held last week that sales of gasoline to governmental agencies of the state were not subject to the 1-cent Federal tax which became effective June 21. The same rule applies to the 4-cent Federal tax on lubricating oils. The attorney general held that the tax is upon the sale and not upon the production of the fuel.

CANADA RECOGNIZES TAX

The Canadian Department of National Revenue has issued a bulletin holding that the new United States taxes of 1 cent on gasoline and 4 cents on lubricating oils are to be included in the fair market value of these products when exported to Canada for both regular and special duty purposes.

WAX DEMAND DECREASES

NEW YORK, Aug. 1.—Imports of paraffin wax into the United Kingdom during the first six months of 1932 totaled 685,668,000 pounds, valued at £569,084, as compared with 604,572,000 pounds valued at £529,066 in the first half of 1931. June imports were 62,029,000 pounds, valued at £55,980, as compared with 105,953,000 pounds, valued at £87,959, in the corresponding month in 1931. Considerable quantities of paraffin wax are imported into England from the United States.

Supreme Court of Texas to Rule on City License Fees

AUSTIN, Tex., July 30.—A test case affecting the financial status of every Texas city is now before the supreme court for decision. Its decision will hold whether or not a city may levy a license fee upon drive-in filling stations. All filling stations in all larger cities, and most of those in the small towns are drive-in stations, those at curb side having long since been outlawed.

The case is the appeal of the city of Fort Worth vs. Gulf Refining Co. and other companies, involving a Fort Worth ordinance levying a $24 annual license fee on each of the 700 filling stations in the city. Trial court at Fort Worth held the city had the right to levy the license fee. The Waco court of civil appeals reversed this decision and rendered judgment for the oil companies. The city appealed to the supreme court, and the case has been submitted before Section B, commission of appeals.

The city claimed the right of police regulation over filling stations, reciting that it confers privileges of cleared driveways, is forced to use police in directing traffic affected by the drive-in gateways, and is subject to liability for repairing the sidewalks and for damages caused by injuries to persons from broken or damaged sidewalks over which the traffic is driven.

The oil companies contended the levy is a tax rather than a license fee, and that it is a tax upon "the right of ingress and egress." The case is the first involving this question to reach the supreme court.

CITY MUST PAY TAX

District Judge Asa E. Walden of Ardmore, Okla., last week held that the city of Ardmore must pay the state tax upon a car of gasoline purchased from the Phillips Petroleum Co. at Wichita, Kans.

EXPLAINS CHANGE IN STATION MANAGEMENT

Sir: We notice where an authority allows himself to be quoted to-wit: "Seventy-one per cent of all service stations are unnecessary." Hooey. We can't speak for all service stations, but once during our checkered career we were the sole prop of a service station that was not only unnecessary, but also unserviceable. We didn't stop with checking tires, battery, radiator and sponging off the windshield; we rethreaded gas tank caps, greased seat cushions and dry-cleaned upholstery. We cashed checks, gave credit, sold stamps, called the neighbors to the phone, advised them how to cure colds, sympathized with housewives who had bad luck with a batch of jelly, solaced war veterans who were suffering with ingrown hairs, listened to Dad Doremus tell how to wrap a fish pole 764 times.

In time, the service end of the business grew to such proportions that we were forced to either discontinue handling petroleum products or else just give up all our ideals and conduct the enterprise just as a straight business.

This, of course, we declined to do. It has always been our idea that a person should get more out of business than just profit.—Joe Buzzard in Spokane Spokesman-Review.

NEWS FOR PETROLEUM REFINERS

Perfect Permanent Organization for Hydro Patents Co.

NEW YORK, Aug. 1.—Standard-I. G. Co. has completed its plan, undertaken in 1930, to pass control of the hydrogenation process in the United States into the hands of the country's oil industry, it was disclosed at a general meeting of stockholders in the Hydro Patents Co., held here during the week.

Under the terms of the plan, Hydro Patents Co. was originally organized by the Standard Oil Co. (New Jersey), which is the controlling stockholder in Standard-I.G. Co. Stock in Hydro Patents Co. was offered to all American oil refining companies of sufficient size to make them potential users of the hydrogenation process, and was accepted by more than 90 per cent of the companies in question. Under the original offer, permanent participation by these companies was contingent upon their taking licenses for the process after investigation, and was further contingent upon the companies having at least 1,467,850 bbls. of aggregate daily crude oil capacity, representing more than 50 per cent of the potential capacity in which the process could be applied in the United States by those companies taking such licenses. The licenses permitted, but did not require, the licensee to use the process, but did specify technical co-operation, creating a full community of interest on the part of all companies participating in all improvements.

The period for the investigation of the process expired on July 1, this year, and as of that date the following companies had accepted the plan and had become permanent stockholders of Hydro Patents Co:

Atlantic Refining Co., Barnsdall Oil Corp., Continental Oil Co., Mid-Continent Petroleum Corp., Richfield Oil Co. of California, Shell-Union Oil Corp., Consolidated Oil Corp., Skelly Oil Co., Socony-Vacuum Corp., Standard Oil Co. of California, Standard Oil Co. (Indiana), Standard Oil Co. of Ohio, Standard Development Co. (for Standard Oil Co. of New Jersey), Pure Oil Co. and The Texas Company.

At the special stockholders' meeting here at which control was passed to the industry, all previous officers and directors of Hydro Patents Co. resigned and a new directorate was chosen, as follows:

(Continued on Page 38)

FRANK JONES DIES

Frank Jones, for several years active in Mid-Continent refining operations, died July 24 at his home in Kansas City, Mo. Mr. Jones, who was 80 years of age, died after a week's illness from pneumonia.

Mr. Jones with his son-in-law, Roy B. Jones, in 1915 organized the Panhandle Refining Co. and built the first refinery in North Texas at Wichita Falls. He sold his interest in the Panhandle company in 1919 and purchased the Lone Star Refining Co., which he operated for three years. Funeral services were held in Kansas City.

COMPLETE EAST TEXAS PLANT

The H. & M. Refining Co. has completed its 500-bbl. skimming plant in the Gladewater area, western Gregg County, making the fourth refinery to be erected in that area, and the twentieth plant for East Texas. Only 12 of the plants have been running regularly, processing around 15,000 to 18,000 bbls. per day. Seven of the plants were shut down during the past week.

Considerable Activity Among Smaller Refiners in Rocky Mountain Region

Reports from several sections in the Rocky Mountain states over the past two weeks, show considerable activity among the operators of small refineries. The Bannatyne Pipe Line & Refining Co., which recently was organized, has taken over the production in Bannatyne Field, located in Teton and Pondeta Counties of Montana and also a small skimming plant located at Collins. The refinery was built in 1929 by the Sterling Oil Co., which operated it for a short time. The company was placed in the hands of a receiver and the plant shut down. Last summer it was sold for taxes to the Consumers Oil Co. which has operated part time since March of this year. The new owners expect to resume operations immediately. The plant is connected by pipe lines to 32 producing wells in the Bannatyne Field. The wells were shut down when there was no outlet for the crude oil. The crude oil from the wells is 28 gravity with an asphalt base.

P. L. Withers, who is head of the Bannatyne company, also is president of the Conrad Refining Co., which is rebuilding a small refinery at Conrad, Mont. The company expects to have the plant in operation by October 15. The construction of a small cracking unit is under consideration.

Across the line from Montana at Coutts, Alberta, the Northwest Stellarene Co. is now operating a Dubbs cracking unit which was completed in July. The unit has a capacity of 1,000 bbls. daily.

New Mexico Plant

Several small oil pools in McKinley County, northwestern New Mexico, which have been shut in since discovery for lack of a market for the crude are expected to be put on production at an early date as a result of the consummation of plans for the building of a pipe line outlet to a railroad connection and the construction of a refinery. The Transport Refining Co., organized under the laws of Nevada with an authorized capital of $1,000,000, will build a refinery at Baca, a station on the Atchison, Topeka & Santa Fe Railroad near the southern boundary of McKinley County and 15 miles southeast of Thoreau, the principal trading center in that district. C. P. Ritter, of Long Beach, Calif., who is well known in Wyoming and Montana where he operated extensively several years ago, is president of the company, and James T. Hurt is vice president. Mr. Ritter also is president of the Olympic Refining Co., of Long Beach. A refinery site at Baca has been acquired from Harold Prewitt. A contract for construction is reported to have been let and the first unit will have a capacity of 1,200 bbls. daily. The pipe line, which will be approximately 35 miles long, will be constructed by a separate company headed by Hurst. The Ross Engineering Co. of Albuquerque has been awarded the contract for the pipe line, Herbert Fleishhacker, of San Francisco, and D. C. Jackling, of the Utah Copper Co., are named by the New Mexico Oil News as among the backers of the project.

There are a number of small wells in what is known as the Seven Lakes district in central eastern McKinley County which produce a few barrels each per day from the Mesa Verde at a shallow depth. This field was discovered about 20 years ago, but it has not been developed to any great extent on account of the comparatively small wells at a location remote from the markets. In 1927 the Midwest Refining Co. discovered the Hospah Pool in its No. 1 Hancock, SE NW Section 1-17-9, which produced 240 bbls. the first 24 hours from a sand in the Mesa Verde at 1,561 feet, and two weeks later made around 160 bbls. The Midwest subsequently drilled two other producers in that formation, but lower horizons were not found productive. The estimated capacity of the three Hospah wells is around 200 bbls. per day.

The Midwest has contracted for the sale of its properties to the new interests as it has no desire to enter the refining business in New Mexico and it is not considered feasible to ship the product to Wyoming with present facilities. This deal was made through Leslie Welch, of Wyoming, who played a prominent part in the development of new fields in the Big Horn Basin in that state a few years ago.

A 100-bbl. plant to operate on Osage crude oil will be built at Belle Fourche, S. Dak., by W. S. Fahner and J. A. Floyd, Casper oil men. The plant will be located on the Deadwood highway and construction work is expected to begin at once.

Advance Intrastate Rates on Refined Oils in Kansas

The Public Service Commission of Kansas on Monday authorized increases in intrastate freight rates on refined oils for distances over 150 miles. The new rates are to become effective August 10.

Authorized following application of the railroads for higher rates on carload lots, the increases range from 1 cent per 100 pounds on hauls of between 150 and 160 miles to 12 cents for 500-mile hauls. Tariffs which the railroads sought were slightly higher than those allowed by the commission for hauls of 150 to 250 miles, otherwise rates sought by the carriers were approved.

May 25 the commission ordered decreases in rates on oil products for hauls under 150 miles and these rates were not disturbed by the order today. Those decreases, I. C. Peterson, commission rate expert, said, ranged from one-third cent to 3 cents for 100 pounds.

Products on which the increased rates will apply are gasoline, kerosene, lubricating oil and distillate. Railroads also had asked higher rates on low-grade oils but the commission assigned that portion of the application for hearing on August 31.

In authorizing the increases, the commission included a requirement that provision be made so that shipments accepted by carriers for transportation via routes other than those authorized in the proposed tariff would be subject to the distance rates for the total distance traversed by the shipment. This was prescribed, the commission said in a memorandum, "in order that shipments misrouted by the shipper would be subject to the distance scale authorized by the commission, instead of class rates or a combination of local rates."

Rates authorized by the commission today apply to shipments over any number of lines.

The commission also announced the intrastate rates for distances of 150 to 250 miles also would apply on interstate traffic moving between Kansas and Oklahoma points.

Government Report Shows Change in Import Shipments

WASHINGTON, D. C., July 30.—The monthly summary of the Bureau of Foreign and Domestic Commerce shows only small imports after midnight June 21 when petroleum and products were placed on the dutiable list. Imports prior to June 21, compared with the previous June, increased.

The value of all petroleum and products imported in June increased from $6,816,072 in June, 1931, to $10,319,731 in June, 1932.

These figures show a great turn in the trend of imports compared with the six-month period ending with June. These imports during the six-month period decreased in value from $52,858,545 in the six months ending June, 1931, to $47,993,065 for the same period of 1932.

Crude petroleum imported in June, 1931, totaled 3,978,381 bbls. valued at $3,060,198, compared with 6,860,949 bbls. valued at $5,126,550 imported free of duty in June, 1932, with an addition of 1,007,804 bbls. valued at $876,716 imported under the duty imposed by the last Congress. This was the first importation of petroleum and products paying duty and covered the period from midnight June 21 to midnight June 30. These imports for the nine days under the dutiable list were a trifle less than one-seventh of the imports for the 21 days preceding the dutiable period. The crude came chiefly from Colombia and Venezuela, imports from the former increasing from 611,000 bbls. in June, 1931, to 2,180,000 bbls. in June, 1932. Imports from Venezuela increased from 1,744,733 bbls. in June, 1931, to 4,252,592 bbls. in June, 1932. Imports from Mexico increased from 1,300,188 bbls. in June, 1931, to 1,650,000 bbls. in June, 1932.

Refined petroleum imported in June increased from 2,383,542 bbls. in June, 1931, to 3,754,616 bbls. in June, 1932. Topped crude, including fuel oil, increased in imports from 1,412,274 bbls. in June, 1931, to 2,062,616 bbls. in June, 1932. These imports were free of duty, coming mostly from the Netherlands West Indies. In June an additional 366,697 bbls. of this class of oil was imported under the dutiable list. The Netherlands West Indies furnished most of this oil or 2,125,829 bbls. in June, 1932, compared with 1,284,183 bbls. in June, 1931.

Gasoline imported free of duty increased from 964,022 bbls. in June, 1931, to 1,316,125 bbls. in June, 1932. The records show the importation in June of just 2 bbls. of gasoline under the dutiable list. In other words, the importations of gasoline seems to have been discontinued at midnight on June 21.

Illuminating oil imported in June totaled 1,150 bbls. free of duty and 194 bbls. dutiable. Lubricating oil coming into the United States in June total 172 bbls. dutiable and 7,658 bbls. free of duty.

Imports of paraffin and paraffin wax imported free of duty decreased from 3,508,792 pounds in June, 1931, to 1,927,029 pounds in June, 1932, there being additional importations of 224,000 pounds of this product in June under the dutiable list.

REFINERY FOR FABYAN

CHATHAM, Ontario, July 30.—A small refining plant, employing the Stillson process and adapted to utilization of heavy crudes, is being built by local interests at Fabyan, Alberta.

NATURAL GASOLINE MANUFACTURE

California Draws on Stocks Natural Gasoline in June

Natural gasoline stocks declined 115,805 bbls. in California during June, this decline marking the second month in which this has occurred since the long period of increasing inventories earlier in the year. Production was curtailed to a total of 43,520,763 gallons, compared to 47,655,909 gallons in May.

The output of liquefied gases was also curtailed despite an increase in the demand.

CALIFORNIA NATURAL GASOLINE STATISTICS FOR MAY AND JUNE

(Daily average in barrels)

	June	May
Total production	34,542	37,010
Stock trans. (deliv.) receipt—net	(426)	(490)
Total	34,416	36,520
Deduct refinery requirements:		
Run to stills	3,317	3,603
Blended	22,199	22,591
Total	25,516	26,194
Gains (losses) unaccounted for—net	(5,324)	(5,115)
Net supply available to market	3,676	5,211
Demand—		
Domestic consumption	566	403
Off-shore shipments:		
Pacific foreign exports	1,728	1,584
Atlantic foreign exports	2,828	2,439
Intercoastal shipments	2,414	2,328
Total market demand	7,536	6,754
Surplus or (deficit)	(3,860)	(1,543)
Stocks—Last day of period—		
Total stocks	2,758,880	2,874,685
Inside Pac. Coast terr.:		
At refineries	2,166,429	2,260,746
Elsewhere	592,451	613,939
Inside Pac. Coast terr.—last day	2,758,880	2,874,685
Inside Pac. Coast terr.—first day	2,874,685	2,922,530
Increase or (decrease) during the period	(115,805)	(47,845)

OPERATING DATA FOR JUNE

Number of plants operating	109
Daily capacity in thousand cubic feet	2,599,001

PRODUCTION BY FIELDS

	Gas treated (M. cu. ft.)	Natural gasoline produced (gallons)
Fullerton and Whittier	550,166	1,318,509
Midway	1,765,536	3,059,705
Huntington Beach	410,139	1,437,956
Kettleman Hills	6,922,690	10,289,329
Long Beach	3,664,466	8,675,390
Richfield	370,288	479,353
Santa Fe Springs	5,242,310	8,091,934
Seal Beach	525,546	1,012,510
Ventura Avenue	2,519,233	2,623,547
All other fields	4,095,990	6,532,030
Total	26,066,364	43,520,763

PRODUCTION BY METHODS

Type of plant—	Gas treated (M.c.f.)	Natural gasoline produced (gals.)	Gasoline recovery per M.c.f. gas treated
Oil absorption	25,911,845	43,345,693	1.672
Compressor	154,519	175,070	1.133
Totals	26,066,364	43,520,763	1.670

Finished gasoline produced at plants, 179 bbls.

STOCKS OF NATURAL GASOLINE

	Gallons
Natural gasoline held by plant operators	2,359,105
Natural gasoline held by refiners	113,513,862
	115,872,967

LIQUEFIED GASES

(Barrels daily average)

	June	May
Production	302	408
Sales	439	402

Rumania Increased Its Natural Gasoline Output to 1,200,000 Barrels in 1931

As a result of the special attention devoted to the extraction of natural gasoline from the gas produced in conjunction with its petroleum output, Rumania has advanced rapidly to third place among the countries of the world engaged in natural gasoline production. From an output of slightly more than 17,000 bbls. in 1925 the Rumanian output has increased annually until a total of nearly 1,200,000 bbls. was achieved in 1931.

The first European endeavor to recover gasoline from natural gas took place in Poland, where gas was fairly abundant and a diminishing supply of crude oil warranted a special interest in the development of supplementary sources of petroleum products. In Rumania, however, the effort to utilize the gases accompanying the crude oil is of fairly recent origin. In 1924 a small company, "Gazolina," was organized at Bucharest to process the gases from the wells of the Credit Minier and Colombia companies. The charcoal process of the Gasoline Recovery Corp. was used in the installation. In the two following years, the Steaua Romano, Sirius and other companies installed plants in several fields, using the Urbain activated carbon process. The industry underwent particular expansion during 1929 and 1930 when numerous plants of the Carbo Union system and that of the Societe de Recherches et d' Exploitations Petroliferes were installed in the important fields by the larger oil companies operating in Rumania. It was during this period that the development of production from the deeper sands afforded an abundant supply of wet gases.

Gasoline recovery plants employing the activated charcoal process are reported to comprise 95 per cent of the total capacity. It is reported that the relative freedom from sulphur compounds makes the Rumanian casinghead gas particularly adaptable to the charcoal process. In addition to its charcoal plants, the Steaua Romana has installed some plants using the oil absorption process. A tabulation of gasoline plants, made in 1931, recorded 25 units with an aggregate annual capacity of 1,303,780 bbls. The 1931 production of 1,197,171 bbls. would indicate that the plants were operated at approximately 90 per cent of capacity.

During 1931, 83,325,812,000 cubic feet of natural gas was produced in the Rumanian oil fields of which 52,906,843,000 cubic feet, or 63.5 per cent, was treated for the recovery of natural gasoline. The output of 1,197,171 bbls., or 50,281,182 gallons, indicates an average recovery of 0.95 gallon per 1,000 cubic feet, nearly equal to the average of 1 gallon per 1,000 cubic feet recorded for the United States. Table 1 records the 1931 data by fields, recently reported by the Moniteur du Petrole Roumain.

Although 63.5 per cent of the natural gas produced in conjunction with oil in the Rumanian fields is treated for the recovery of its gasoline content, sufficient markets have not been developed to provide an outlet for the residue gases and the gases with gasoline content insufficient for the commercial extraction of gasoline. An apparent effort has been made by the Rumanian oil producers to substitute residue gas for fuel oil as a fuel in the field operations, thus permitting an increased amount of petroleum products for the export market. A small portion of the gas also is marketed in the communities adjoining the oil fields, both for industrial and domestic purposes. Some portion of the gas is used in gas-lift operations. It is reported, however, that 60,405,014,000 cubic feet, or 72.5 per cent of the recorded output, was blown into the air during 1931.

With an output of 83,325,812,000 cubic feet, natural gas production of the Rumanian oil fields was equal approximately to the 1930 output of natural gas in Pennsylvania. In addition to the gas produced in conjunction with oil, Rumania produced 6,333,011,000 cubic feet in the so-called "methan fields" of Transylvania. The 1931 output was 1,619,278,000 cubic feet, or 20 per cent less than the production of 7,952,289,000 cubic feet reported for 1930. Of the 1931 production, Sarmasal contributed 3,278,190,000 cubic feet; Saros, 1,796,056,000 cubic feet, and Bazna, 1,258,765,000 cubic feet. The gas from the "methane fields" is marketed locally to the neighboring communities. The distribution of the 1931 and 1930 production is shown in Table 2.

TABLE 2—DISTRIBUTION IN THE USE OF GAS

	1931 (M.cu.ft.)	1930 (M.cu.ft.)
Industrial	4,190,147	6,138,878
Domestic	1,472,745	1,218,488
Line losses	670,119	594,923
Total	6,333,011	7,952,289

TABLE 1—FIELD OPERATIONS FOR 1931

Field—	Gas produced (M. cu. ft.)	Gas treated (M. cu. ft.)	Gasoline produced (gallons)	Gals. per M. cu. ft.
Moreni	51,008,816	31,140,025	24,686,928	0.793
Gura-Ocnitzi and Ochiuri	14,110,048	10,922,043	13,249,194	1.213
Boldesti	11,497,285	6,806,214	4,662,315	0.685
Ceptura	2,442,651	1,784,455	2,619,834	1.468
Others	4,267,012	2,254,106	5,062,911	2.246
Total	83,325,812	52,906,843	50,281,182	0.95

CALIFORNIA NATURAL MEETS

LOS ANGELES, Calif., Aug. 1.—The August meeting of the California Natural Gasoline Association will be held here in the Hotel Alexandria ballroom at 6:30 p.m., August 11, at which a paper will be presented by David E. Day on the Lachman process for the treating of light oils by the use of zinc chloride.

Doctor Lachman developed the process at the University of California and carried on commercial experimental work at the Richfield Oil Co.'s plant in co-operation with Mr. Day, head of the Richfield technical staff. The treatment has been explained in connection with refinery operations and its application to natural gasoline plant practices will be discussed. The meeting is open to the public.

MISSOURI BUTANE PLANT

JEFFERSON CITY, Mo., July 30.—The Missouri Public Service Commission has issued a certificate of convenience and necessity to the Clinton Gas & Distributing Co. to permit this company to construct, maintain and operate a butane gas plant at Cameron and distribute the gas there. The commission has approved the company's application to issue 800 shares of no-par common stock but refused to permit the issue of $30,000 of bonds.

Natural Gasoline Product of Crude for Tax Purposes

Natural gasoline manufacturers have been awaiting regulations regarding the handling of tax payments on the various grades and also on the question of what payments must be made on the pipe line transportation of natural gasoline and its products.

The Natural Gasoline Association of America has placed pertinent questions before the treasury department and in a few cases these have been answered, but the complexity of this problem and that of other industries whose questions must be answered by the department has left many unanswered.

In the past week the treasury department, through David Burnet, commissioner, has made a ruling that natural gasoline is a liquid product of crude petroleum within the meaning and intent of Section 731 of the revenue act of 1932, the transportation of which by pipe line makes it subject to the tax imposed by such action. In support of these conclusions, Commissioner Burnet cited the opinions offered in the following cases: Wemple vs. Producers Oil Co., 145 La. 1031, 83 So. 232; Locke, et al., vs. Russell, 75 W. Va. 602, 84 S.E. 948; Livingston Oil Corp. vs. Waggoner, 273 S.W. 903; Connellee, et al vs. Magnolia Petroleum Co., 279 S.W. 597; Gilbreath vs. States Oil Corp., 4 Fed. (2d) 232; Twin Hills Gasoline Co. vs. Bradford Oil Corp., 264 Fed. 440.

As a result of the broad interpretation which could be placed upon this ruling various companies are considering plans whereby they would protect their interests against unreasonable or what they consider unequitable levies. The principle question is one regarding what lines are incidental to the plant's operation and what might be classed as common carriers.

Strong arguments can be presented against the taxing of pipe line deliveries made in the plant as part of the plant's operation but in those cases where the gasoline moves to a market or is unusual in some other manner, it is reasonable to expect wide differences of opinion will arise.

As the matter now stands, the companies are considering following one of four programs in reporting gasoline shipments to the treasury department, namely:

1. Declare that all pipe lines are incident to manufacturing processes and not in any sense "common carriers," and, therefore, not taxable under the act.

2. Deny liability for the tax by protesting the department's interpretation that natural gasoline is a liquid product of crude petroleum.

3. Classify and describe in detail such pipe lines on which you want the commissioner to determine a fair transportation charge so that the tax can be computed and paid under protest.

4. Compute the tax on your own estimate of a fair tariff rate on such pipe line transportation as you consider taxable under the department's interpretation above mentioned, remitting the tax under protest and filing suit to recover.

It is probable that the revenue department's interpretation will be litigated and eventually the U. S. Supreme Court will decide the matter, but pending that decision the revenue department must also rule on the question of what, if any, normal plant lines constitute common carrier facilities, and the commissioner will have to promulgate or approve fair tariff rates.

Warren Petroleum Company Adopted Business Formula

(Continued from Page 13)

in Battle Creek, Mich., and then in Fort Des Moines, Iowa. In the latter place veterans from Oklahoma told him glowing stories of Tulsa and of the Mid-Continent's rising oil empire. Soon thereafter he resigned from Red Cross work and boarded a train for Tulsa.

As his train approached Tulsa at night young LaFortune saw the myriad lights of the city and he said to himself "There must be a job there for me." Rising the next morning, he set out to find the job. Methodically he canvassed one office building after another, starting on the top floor and taking each lower floor in turn. In this fashion he visited 30 to 35 business offices daily for four days. He also answered "help wanted" advertisements. The fifth day he found he had landed two jobs. He took the one offered by an advertising agency and kept it for nine months. The next three years were devoted to daily newspaper and oil trade publication work. In 1923 he became assistant secretary of the Mid-Continent Oil and Gas Association and he was filling this position when he joined the Warren Petroleum Co.

Mr. Brown died in 1929, following which Howard E. Felt was received into the company. Mr. LaFortune, who had been secretary, now succeeded Mr. Brown as vice president, and Mr. Felt was made secretary. Personal friendship of long standing with members of the Warren organization preceded Mr. Felt's affiliation with the company.

Knew He Was Going to Be an Oil Man

As a boy in Franklin, Pa., Mr. Felt knew he was going to be an oil man. No thought of being anything else ever entered his head. So in vacations he worked as a sample boy in the Eclipse works of the Atlantic Refining Co., carrying samples from the stills to the laboratory. The World War upset his plans temporarily and upon graduating from the University of Pennsylvania School of Finance and Commerce in May, 1917, he entered military service and went overseas as a lieutenant in a machine gun company of the Seventy-ninth division.

The war over, Mr. Felt went back to the Eclipse works, where as a preliminary sales work he was put through a course of work in every department of refining, beginning with shoveling coal into the old-time still furnaces. With completion of his apprenticeship Mr. Felt knew what he was talking about when he started out to sell petroleum products. Desiring to familiarize himself with the producing branch of the business, the young man next got an oil field job with the Shaffer Oil & Refining Co., working under W. L. Shaffer, general superintendent of field operations for the company in Texas and Louisiana. In January, 1921, Mr. Felt received from E. G. Hukill, president of the American Petroleum Products Co., an invitation to go to Tulsa and enter its employ. He accepted and for the next five years he was engaged in the general marketing business of this company. In 1926 Mr. Felt became associated with Dale W. Moore, Tulsa, who represented buyers of all grades of petroleum products. He remained with Mr. Moore till he joined the Warren Petroleum Co. in February, 1929.

Close-Knit Organization

Among Mr. Warren, Mr. LaFortune and Mr. Felt there exists the intimate understanding and friendliness that develops in men bound by common business ties and with unreserved confidence in each other. While each looks after a certain group of accounts which in a limited sense are viewed as personal, each is familiar with the other groups of accounts, so that regardless of whether any one of the three happens to be absent from the office, no client finds himself talking to a stranger.

Having outgrown its quarters in the Ateo Building, the company in 1924 moved to three rooms in the First National Bank Building. Long before this the financial considerations which made it necessary for Mrs. Warren to fill in at the office had ceased to exist.

The business continued to grow, the staff had to be enlarged and still more room became imperative, so in 1928 the company moved into its present commodious quarters in the tower of the Exchange National Bank Building.

Instead of the one accountant who had been able to take care of all office records in 1922, a force of 20 now was required, including traffic managers, accountants, stenographers, etc.

D. W. Franchot, who built the first natural gasoline plant in the Kiefer area, was the Warren Petroleum Co.'s first client of record and he remained a client till he discontinued his plant in 1930. M. F. Powers and the Gilliland Oil Co. were next. Then came a train of new accounts as it was realized that the Warren organization afforded manufacturers who had inadequate marketing facilities or no marketing facilities at all an immediate outlet for their natural gasoline. Large refinery buyers, who took most of the natural gasoline produced, soon turned to the new company, which they discovered could assure them of delivery in the quantities they required.

Murray Shutdown Did Not Matter

When Governor Murray issued his shutdown order in the Oklahoma City Field in 1931, enforcing it with national guardsmen, one of the major sources of natural gasoline was cut off. Notwithstanding this sharp reduction, the Warren company, in quick touch with supply areas throughout the country, did not find it necessary to refuse a single order during this period of shortage.

So implicit is the confidence between the company and its clients that some refiners say they often give their orders without even asking about price. The Warren company today serves as sales representative and associate of a group of natural gasoline manufacturers whose annual production aggregates 150,000,000 gallons.

Two subsidiaries have been formed. The Western Gasoline Corp., organized in 1929, operates natural gasoline plants in Kellyville, Okla., and has interests in other plants. The Natural Gasoline Corp., organized in Pittsburgh, Pa., in 1930, operates in Pennsylvania and West Virginia, performing a service in its field similar to that of the Warren company. The officers of the parent company are also the officers of the two subsidiaries, except that William P. Dunbar, of Pittsburgh, is vice president of the Natural Gasoline Corp. and in direct charge of its activities. Walter Kiley, stenographer for the company in its early years, now represents it in Houston, Tex.

Special Order for Pipe Line Reports Is Issued by Commission for East Texas

AUSTIN, Tex., Aug. 1.—The Railroad Commission of Texas, oil and gas division, has issued the following special order requiring certain reports and investigations to be made by transporters and producers or shippers of crude oil from East Texas:

"It is hereby ordered that the following regulations be and the same are hereby adopted effective 7 a.m., July 20, 1932:

"1. Each and every pipe line operating in the East Texas Field, as defined in previous orders, whether trunk pipe line, gathering pipe line, whether such pipe line is leased or owned, when offered crude oil produced in the East Texas Field for transportation to any point, or storage to any point, is hereby required to notify the Railroad Commission of Texas by a report in writing on the same date they are offered such oil for transportation, advising said commission in detail, stating amount of oil offered; by whom it is offered, in what tanks oil is stored, and the location of such tanks; to whom oil is consigned, and consignee's address; and for whose account such oil is to be run. All such pipe lines will make two copies of this report, one to be mailed to the Railroad Commission of Texas, military headquarters office, Kilgore, Tex., and the other copy to be immediately mailed to the Railroad Commission of Texas, oil and gas division, Austin, Tex.

"2. All of the pipe lines described in the next preceding paragraph, whether company lines or privately owned lines, when tendered oil produced in the East Texas Field, for transportation to any point, are hereby ordered, in addition to making the above requested reports to the Railroad Commission, must before transporting any oil offered, secure from the person, persons, firm or corporation making the tender of oil for transportation a report supported by affidavit covering the following information:

"(a) Name and address of person, persons, company or corporation tendering oil for transportation.

"(b) Name and address of person, persons, company or corporation who owns the oil offered for transportation.

"(c) Name and address of person, persons, company or corporation to whom oil is being consigned, and for whose account the oil is run.

"(d) What person, persons, company or corporation produced the oil offered for transportation, showing names of leases, number of wells on each lease, and location of leases by survey and county from which oil offered for transportation was produced, or from which the same is to be produced.

"(e) On what date or dates oil offered for transportation was produced, and daily amount produced from each lease.

"(f) Whether or not the oil tendered for transportation was legally produced, according to the statutes of the State of Texas, and orders and rules of the Railroad Commission of the State of Texas.

"3. All of the above classes of pipe lines defined in Paragraph 1 hereof are hereby required to cause to be made a personal investigation as to the correctness of the facts as stated in the report and affidavit required in the second paragraph hereof.

"4. Every person, persons, firm or corporation tendering oil produced in the East Texas Field, for transportation or storage to any point, are hereby required to submit at the time of the tender of the oil to the transportation company or persons owning the storage tanks where said oil is to be stored, an affidavit showing all the information required in the report and affidavit required in Paragraph 2 hereof.

"5. All classes of pipe lines, including trunk lines, gathering lines, leased gathering or trunk lines, operating in the East Texas Field, after securing the report and affidavit from the person, persons, firm or corporation tendering oil for transportation or storage, as required herein, and after the transporting pipe lines have made their own personal investigation as to the correctness of the sworn affidavit and the origin of the oil tendered, as required herein, the transporting pipe line will make a report in duplicate of their own personal investigation as required in Paragraph 3 hereof, and also furnish two copies of the affidavit required of the party making the tender of oil for transportation or storage required in Paragraph 2 hereof, and shall at once mail one copy of report of investigation and one copy of sworn affidavit to the Railroad Commission's office, Kilgore, Tex., and one copy of each to the chief supervisor of the oil and gas division of the Railroad Commission of Texas at Austin, Tex.

"6. No oil shall be transported or received for storage except in accordance with the foregoing regulations.

"7. Where any oil is transported by any pipe line and delivered to a connecting pipe line, such oil shall be accompanied by the affidavit form E-N, report of inspection and investigation, required in the foregoing regulations."

Survey Gives Data on Gasoline Storage Losses

(Continued from Page 12)

area per year. This latter was found to be a very satisfactory common denominator for comparing test results of tanks varying widely in diameter and height.

In addition to determining the volumetric loss, the decrease in vapor pressure which resulted during the evaporation in the laboratory was noted for each of the 24 gasolines. This was done in order to determine the decrease in volatility of gasoline which takes place as evaporation occurs and which constitutes a financial loss that must be added to the value of the volumetric loss to obtain a true total.

For the first 1 per cent of evaporation loss this decrease in vapor pressure (100° F.) varied from 0.5 pound per square inch to 1.7 pounds per square inch for the different gasolines with an average of 0.9 pound per square inch. For the first 5 per cent of evaporation loss the drop in vapor pressure varied from 1.9 pounds per square inch to 6.3 pounds per square inch, with an average of 3.9 pounds per square inch.

Conclusions

Ten tests on cone roof storage tanks gave an average annual evaporation loss of 11.6 gallons per square foot of tank area. Fourteen tests on tanks equipped with floating roofs gave an average annual evaporation loss of 2.2 gallons per square foot of tank area.

2. Transformed into the more commonly used factor, "per cent of tank capacity per year," the above results for large storage tanks, 40 feet high, would be 3.8 per cent for cone roof tanks and 0.7 per cent for floating roof tanks.

3. The rate of liquid loss for either cone or floating roof tanks was practically independent of liquid depth between the limits of full and one-third full.

4. The average decrease in vapor pressure (100° F.) for the first 1 per cent of evaporation loss for the 24 gasolines encountered in this survey was 0.9 pound per square inch, and for the first 5 per cent of loss the average decrease was 3.9 pounds per square inch.

Managers Interested in Most Economical Methods

(Continued from Page 8)

ators, in addition to the labor saving, state there is a saving in fuel costs per barrel of throughput, and they also figure that the depreciation and maintenance charge is less. They say that the fuel efficiency is greater when operated capacity, and they feel that the maintenance and depreciation items are less when certain plant equipment is shut down rather than operated part capacity. They do not as yet have accurate figures as to the amount of these savings.

In regard to labor savings with complete shutdowns over a part of a month, the experience of plant operators varies. In some cases with skimming and cracking equipment shutdown, operators found it necessary to continue the employment of approximately 50 per cent of their force. Others have reduced it 75 per cent. One operator is figuring on operating the coming fall and winter on a basis of a two-week shutdown out of every two months. This plan may be modified so that three months' capacity operation will be followed with a one-month shutdown. By planning for this operation in advance this operator believes it will be possible to reduce the operating force to loaders, watchmen and boiler firemen. In this case the only steam generated will be that necessary for fire protection.

With this method of operation it would be possible to save up to 20 per cent of the monthly labor cost based on a 75 per cent operating schedule. With the 10,000-bbl. plant this would amount to approximately $3,000 monthly. In regard to shutdowns, the modern distillation equipment installed at most refineries does lend itself to cessations in operations much more readily than did the old-type shell stills. Operators are constantly improving their records in regard to time required for shutdowns and also the time to get distillation equip-

ment on steam after a shut-down period. No special maintenance problems have been experienced with the shut-down policy.

Controlling Factor

With data similar to that given in the foregoing tables, the executive of a company engaged in all branches of the industry declared it showed clearly that refiners could well afford to do whatever was necessary in curtailing their operations to keep the supply of gasoline in line with current needs. The controlling factor, he pointed out, should be the well-being of all branches of the industry. The difference between maximum efficiency obtainable when operating capacity compared to that possible when operating 75 per cent capacity is less than one-fourth cent per gallon in the production of the principal product. Trying to save this one-fourth cent, this executive points out, has caused refiners in the past to flood their markets, bringing 1 to 4 cents per gallon reductions in retail prices and unprofitable schedules for the producers of crude oil.

Constructive Thought and Action Urged by Seubert

Edward G. Seubert, president of the Standard Oil Co. (Indiana) addressed, the following message to the stockholders and employes of the company:

"At the height of boom times in 1929 there was much talk that we had reached a new level of economic prosperity and that conditions would always be as good as they were then, or better.

"Today the pendulum has swung to the other extreme. Talk is heard that there never will be an economic recovery, that still worse times are ahead, that the country is, in fact, going straight to the dogs. As has happened in other times of depression, it has become more or less common to hear loose gossip about the stability of the institutions of our civilization. Such gossip circulates not only among those who are really suffering from the effects of hard times, but also among many who are relatively well situated and have no real cause for fear.

"In such an atmosphere the work of the professional agitator thrives. Suggestions of revolt against the established order of government and society which would receive no consideration at all in normal times gain a hearing and take on a certain amount of seriousness. It becomes necessary to oppose destructive talk by constructive thought and action, to meet agitation with calm and courageous reassurance.

"The stockholders and employes of our company are representative of the highest type of American citizenship. In protesting against the rising cost of government or demanding application in government of some of the same measure of economy to which we have been obliged to subject ourselves in business, we are not weakening in our loyalty to the Government.

"Of the necessity of government and of the superiority of the American type of government we have absolutely no doubt. We stand solidly for the Government as the basis and controlling force in the free social and economic organization of which we are part. We believe in the advantages of the civilization developed in America, whatever its temporary ills, and we stand for its preservation.

"Current conditions call for adoption by the patriotic citizen of something like the same aggressive attitude in protecting his country, his home, and the order of which he is part that he shows especially in time of war.

"No matter how bad the current depression may be, we know that it is going to end sooner or later. It has shown no developments, except possibly in degree of intensity or ill effects, that have not been experienced in past depressions in the country's history. A return to better conditions is bound to occur eventually in this instance as in the past.

"Meanwhile, our job—the job of all good citizens—is to meet the situation as best we can, striving always to exert any influence we can toward improvement. I feel that stockholders and employes of Standard of Indiana have a particularly serious responsibility in this respect. While we have had to take a fair share of the blows of the last two years, we have been relatively fortunate in escaping the most dire results.

"As stockholders we are still able to receive some return from our investment. As employes we have had to take our reduction in pay, but it came only after nearly two years of depression developments. Some of us are on reduced time schedules for lack of sufficient work for all. Some few are, I hope temporarily only, laid off. But by and large, and in comparison with the employes of many other companies and industries, we remain one of the industrial groups least damaged by today's adversities.

"We are in the grip of something too large for our company or any group of companies to control. Whatever we do can affect the general situation only in small part. We are trying to do our share toward ending the depression. The combined efforts of thousands of organizations toward that end will eventually succeed.

"Our most immediate task is to keep up our morale as individuals and as a company. Every one of us, even if in the most difficult situation ever experienced, must square his shoulders and meet the problem without loss of faith or courage.

"We must hold to the institutions upon which economic stability depends. We must defend them against any threat that may lurk in radical propaganda. Expressions of confidence and loyalty by the 108,000 stockholders and approximately 36,000 employes of our organization can well be a great force toward maintaining or bettering the public morale.

"I appeal to every man and woman connected with or interested in Standard Oil to take a firm and patriotic stand against insidious and destructive influences. Constructive thinking and constructive action will hasten the recovery."

Exhaust of Diesel Is Made Quiet and Clean

By combining a water scrubber and a Maxim silencer in one corrosion-proof unit, the Maxim Silencer Co., Hartford, Conn., has produced a compact silencer which, the company says, not only makes the exhaust of a Diesel engine quiet, but also makes it sparkless and clean. On gasoline and gas engines it will eliminate the possibility of exhaust line explosions. It is offered for installation on the exhausts of Diesel engines used in tankers, where sparks must be eliminated. According to the manufacturer, it will make the exhaust of a Diesel engine as inoffensive, as far as sparks and dirt are concerned, as the exhaust of a gasoline engine.

This new silencer, called the Model EW, is built of cast iron throughout, making it corrosion-proof. Only a moderate amount of water is required, the cooling circulation being sufficient. It is smaller and lighter, size for size, than the standard dry type Maxim silencer.

TEXAS SEABOARD BUYS

FORT WORTH, Tex., Aug. 2.—Texas Seaboard Oil & Gas Co. has purchased one-quarter interest held in 1,029 acres in Gregg County by Cranfill & Reynolds. The Atlantic Oil Producing Co. owns the remaining three-quarters interest. Consideration was $500,000. There are 38 completed producers on the acreage and 6 wells drilling and several locations waiting drilling. Texas Seaboard Co. is a subsidiary of Seaboard Oil & Gas Co., a Delaware corporation.

SUMMARY OF STATEMENTS MADE JULY 10, 1932, RELATING TO BUSINESS OF VARIOUS PIPE LINES FOR MONTH ENDING JUNE 30, 1932

	Gross stocks	Runs from wells	Other receipts	Regular deliveries	Other deliveries
National Transit	704,495.00	144,953.51	954,172.20	531,479.14	544,672.97
S. W. Pa. P. L.	524,603.77	74,636.04	716,807.81	347,391.97	435,839.44
Eureka P. L.	1,172,808.19	284,902.07	367,381.02	326,763.56	364,763.67
Buckeye P. L. (Macksburg)	806,904.25	255,814.51	157,790.91	271,862.46	112,685.50
Buckeye P. L. (Lima, etc.)	3,311,429.11	90,909.75	2,219,346.68	1,425,243.21	737,789.50
Buckeye P. L. (Cleveland)	30,067.94	12,368.10	201,517.42	1,955.30	214,768.32
Indiana P. L.	473,754.90	3,132.06	1,268,171.89	1,000,264.12	299,047.91
Southern P. L.	263,226.94	.....	201,617.57	65,283.50	66,910.94
Bradford Trans.	257,371.07	419,696.68	.....	436,376.77	.....
New York Transit	105,004.59	43,716.25	88,416.88	194,532.17	.....
Northern P. L.	211,430.61	.....	374,797.93	98,284.38	282,214.80
Tide Water P. L.	655,876.80	24,651.06	.....	501,453.99	.....
Tuscarora Dev.	8,829.21	.....	.....	360,897.93	.....
Total June 30	8,025,852.38	1,354,780.03	6,549,920.31	5,561,888.50	3,062,693.05
Total May 31	8,124,625.52	1,350,453.93	7,055,722.68	5,670,771.25	3,313,497.68
Difference	98,773.14	4,326.10	505,802.37	102,882.75	250,704.63

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective June 26, 1932)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Signal Hill (Long Beach)	Alamitos Heights, Seal Beach, Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canyon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Athens, Rosecrans, Dominguez	Montebello	Wheeler Ridge	Coalinga	Whittier-LaHabra
14-14.9	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	....	$ 55	$ 55	....	$ 65	$ 55	$ 55	$ 55
15-15.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
16-16.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
17-17.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
18-18.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
19-19.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
20-20.9	69	69	71	69	69	69	69	65	....	59	59	....	65	57	59	68
21-21.9	74	74	77	74	74	74	74	66	....	63	63	....	67	60	62	72
22-22.9	79	79	82	78	79	79	79	70	....	69	69	....	70	63	65	77
23-23.9	84	84	88	82	84	84	84	76	....	75	75	....	73	66	68	83
24-24.9	89	89	92	86	89	89	89	81	73	81	81	89	76	69	72	89
25-25.9	93	93	....	91	93	93	93	86	79	87	87	93	80	72	75	....
26-26.9	97	97	....	96	97	....	....	90	84	92	91	97	....	....	....	....
27-27.9	1.00	....	....	....	1.00	....	....	94	89	97	94	1.00	....	....	....	....
28-28.9	1.03	....	....	....	1.03	....	....	98	94	1.02	99	1.03	....	....	....	....
29-29.9	1.06	....	....	....	....	....	....	1 02	98	1.07	1 02	1.06	....	....	....	....
30-30.9	1.09	....	....	....	....	....	....	1 05	1.02	1 12	1.05	1 09	....	....	....	....
31-31.9	....	....	....	....	....	....	....	....	1 06	....	....	1.12	....	....	....	....
32-32.9	....	....	....	....	....	....	....	....	1 10	....	....	1.15	....	....	....	....
33-33.9	....	....	....	....	....	....	....	....	1.14	....	....	....	....	....	....	....
34-34.9	....	....	....	....	....	....	....	....	1.18	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	....	1 22	....	....	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same prices as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Dominguez, Torrance, Santa Fe Springs, Playa Del Rey, Coyote, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum Co. adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon, and Olinda, up to 25.9 degrees; Richfield, Ventura Avenue, Midway-Sunset, Fruitvale, Kern River, Poso, Round Mountain, and Coalinga and posted in Rincon as follows: 22-22.9 degrees, 68 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 82 cents; 26-26.9 degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 92 cents; 29-29.9 degrees, 95 cents; 30 degrees and over, 98 cents. In Rosecrans General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-22.9 degrees, 79 cents; 23-23.9 degrees, 84 cents and Standard's prices for oil of higher gravity.

Associated Oil Co., effective June 26, met Standard Oil Co.'s prices in Signal Hill, Huntington Beach, Seal Beach, Alamitos Heights, Richfield, Torrance, Inglewood, Athens, Rosecrans, Dominguez, Santa Fe Springs, McKittrick, Kern River, Midway Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Belridge and Coalinga.

Kettleman Hills—The Union Oil Co., effective June 26, posted 32-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents; 38-38.9 degrees, $1.01; 39 degrees and over, $1.02, Standard Oil Co., Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

Santa Paula—The Union Oil Co. and The Texas Company, effective June 26, posted as follows: 14 degrees to 19.19.9 degrees, 65 cents; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 72 cents; 22-22.9 degrees, 75 cents; 23-23.9 degrees, 78 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 84 cents; 26-26.9 degrees, 87 cents; 27-27.9 degrees, 90 cents; 28-28.9 degrees, 93 cents; 29 degrees and above, 99 cents.

Shiells Canyon and South Mountain—The Texas Company, effective June 26, posted same prices as in Santa Paula.

Orcutt—The Union Oil Co., effective June 26, posted prices as follows: 16 degrees to 19.9 degrees, 55 cents; 20-20.9 degrees, 59 cents; 21-21.9 degrees, 63 cents; 22-22.9 degrees, 69 cents; 23-23.9 degrees, 75 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 87 cents; 26 degrees and above, 92 cents.

Playa Del Rey—Subject to a field gathering charge of 5 cents per barrel.

Newhall, McKittrick and Kern River—Standard Oil Co., effective June 23, 1931, posted 55 cents for oil of all grades.

Elwood Terrace—Standard Oil Co., effective June 26, 1932, posts 33-33.9 degrees, $1.04; 34-34.9 degrees, $1.10; 35-35.9 degrees, $1.16; 36-36.9 degrees, $1.22; 37-37.9 degrees, $1.28. All prices f.o.b. ships.

Ventura Avenue—General Petroleum Co. and Associated Oil Co. effective June 26 posted as follows: 22-22.9 degrees, 72 cents; 23-23.9 degrees, 77 cents; 24-24.9 degrees, 82 cents; 25-25.9 degrees, 86 cents; 26-26.9 degrees, 90 cents; 27-27.9 degrees, 93 cents; 28-28.9 degrees, 98 cents; 29-29.9 degrees, 99 cents; 30 degrees and over, $1.02.

Putrero—Associated Oil Co., effective June 26, posted same prices as are paid by all companies in Athens, Rosecrans and Dominguez.

A.I.M.E. Issues Annual Book of Meeting Papers

The petroleum division of the A.I.M.E. has recently issued its annual edition of Petroleum Development and Technology containing papers presented before the fall meeting held in Houston, Tex., October 2 and 3, 1931, and the annual meeting at New York City February 16-18, 1932.

The volume is divided into six chapters dealing with stabilization, economics, production, production engineering, engineering research and refining. They contain comprehensive and valuable articles on each of these subjects and under the production heading reports are made of both domestic and foreign field developments during the previous year.

In his letter of transmittal Charles E. Beecher, chairman of the division for 1931, states in part:

"The chapter on stabilization carries on the thought of unit operation to some extent and the necessity for studying factors that have a bearing on the stabilising influences of the petroleum industry. Stabilization is one of the most important problems at present and its study will probably be continued in next year's program."

Earl Oliver, the chairman for the petroleum division for 1932, outlines the plans for the division for this year and to some extent expands upon the ideas suggested by Mr. Beecher.

The volume is obtainable from the A.I.M.E. headquarters, 29 West Thirty-ninth Street, New York City, by both members and nonmembers of the institute.

MICHIGAN GAS LINES

DETROIT, Mich., Aug. 1.—The State Public Utilities Commission has been asked to approve the issuance of securities by companies contemplating supplying Big Rapids and possibly Muskegon industries with natural gas from the Central Michigan Field.

Harris Galpin, counsel for the West Michigan Gas Co. and the Michigan Natural Gas Pipe Line Co., indicated that the company proposes to run a 3-inch pipe line from the Broomfield area in Isabella County to Big Rapids, a distance of 30 miles, and take over the artificial gas plant in that community. These plans, he said, were dependent on finding an adequate supply of natural gas in the wells being developed west of the so-called Broomfield Field. He also suggested that if the supply was sufficient a pipe line might be laid from Big Rapids to Muskegon to supply industrial users in the latter city. The commission has taken the application under advisement.

GAS RATE INJUNCTION DISSOLVED

AUSTIN, Tex., Aug. 1.—District Judge J. D. Moore, after arguments Monday, dissolved a temporary injunction granted the Railroad Commission preventing the Community Natural Gas Co. from changing its rates in 90 small towns. The State contended these were to be mostly raises which was denied by the company.

No disposition has been made of the gas company's petition for an injunction to restrain the State from further interfering with it in adopting these revised rate schedules. That will come up later.

It was stated by a representative of the gas company that the rate changes would go into immediate effect and be carried in the next bills received by gas users.

DEATH OF ANTHONY P. HAUCK

Anthony P. Hauck, for the past 12 years chief engineer in charge of the compressor department for the companies comprising the Charleston group of the Columbia Gas & Electric Corp., died of pneumonia at Winchester, Va., July 16. Mr. Hauck was one of the oustanding engineers in his line. In 1902 he associated himself with the Allis Chalmers Manufacturing Co. of Milwaukee, Wis., where he held various responsible positions, finally becoming assistant general manager, which position he held until he became associated with the Columbia Gas & Electric Corp. Since that time he resided in Charleston, W. Va.

OUSTER TRIAL OCTOBER 3

AUSTIN, Tex., Aug. 1.—Attorney General James V. Allred announced here that he will ask District Judge J. D. Moore of 98th district court at Austin to set for trial beginning October 3 his antitrust suit against 15 oil companies and two petroleum marketing associations, asking a possible maximum $17,850,000 in penalties for adherence by the companies and associations to the code of ethics in marketing practices.

Mr. Allred said he will request George E. Shelley, Austin, special commissioner, to summon W. R. Boyd, New York, executive vice president of the American Petroleum Institute, to Austin Monday, September 1, to resume the advance testimony before the commissioner, preparatory to beginning the trial. So far, R. C. Holmes, president of The Texas Company, has testified before Commissioner Shelley.

DIVIDENDS DECLARED

NEW YORK, Aug. 1.—Standard Oil Co. of New Jersey has declared the usual extra dividend of 25 cents a share in addition to the regular quarterly payment of the same amount. Both are payable September 15 to stock of record August 16.

Directors of the Standard Oil Co. of Indiana have declared a cash dividend of 25 cents a share payable September 15 to stockholders of record August 15.

CONTINENTAL EARNINGS

Report of Continental Oil Co. (Delaware) and subsidiaries for quarter ended June 30, 1932, shows consolidated net income of $1,616,346 after taxes, intangible development costs, depreciation, depletion, interest and minority interest, equivalent to 34 cents a share on 4,738,593 no-par shares of capital stock. This compares with net loss in preceding quarter of $1,872,848 and net loss in June quarter of 1931 of $4,037,698. For six months ended June 30, 1932, net loss was $256,502 after taxes and charges, comparing with net loss of $6,528,841 in first half of previous year.

Late Fields

OKLAHOMA

Shell Petroleum Corp.'s No. 6 McCully, NE cor. SW SE, Section 30-19-4w, Logan County, was drilled deeper and found a new producing horizon for the field, at 6,171-73 feet, where it flowed 1,140 bbls. July 30 and 1,006 bbls. July 31. The gas is now estimated at 5,000,000 feet a day.

Slick-Urschel, Inc.'s No. 15 Classen-Edwards, SE cor. NW SW, Section 3-11-3w, in the Oklahoma City Field, flowed into the tank but the exact gauge was not available. The total depth of the well is 6,495 feet and the 6-inch casing is landed at 6,370 feet.

Heenan-Coe and others' No. 1 McKee, NW cor. NE NW, Section 3-11-3w, in the north end of the Oklahoma City Field, started flowing without being bailed, making 1,625 bbls. of oil in 3½ hours through a 3¾-inch choke. The gas was estimated at 30,000,000 feet a day. The total depth of the well is 6,460 feet and the 9-inch casing was landed at 6,309 feet.

Phillips Petroleum Co.'s No. 1 Calkins, SW cor. NW NE, Section 3-11-3w, was completed for 4,070 bbls. of oil in 2½ hours. The gas was estimated at 35,000,000 feet a day. It was produced through two 3-inch chokes. The total depth of the well is 6,475 feet and the 9-inch casing landed at 6,303 feet.

Harper Turner and others' No. 1 Alvah, NE cor. SE SW, Section 22-11-3w, on the west side of the Oklahoma City Field, flowed 390 bbls. of oil in an hour. The gas was estimated at 20,000,000 feet a day. The total depth of the well is 6,560 feet and the 6-inch casing landed at 6,537 feet.

Bee Oil Co.'s No. 1 in Section 20-9-6, Seminole County, flowed 800 bbls. of oil in 24 hours from the Calvin sand at 2,751-88 feet. It was then shut in under the proration agreement.

Amerada Petroleum Corp.'s No. 3 Chase, SW cor. NW SE, Section 29-9-6, West Seminole Pool, flowed 995 bbls. of oil in 12 hours from the Wilcox sand at 4,069-92 feet.

KANSAS

Viking Oil Co.'s No. 1 Satrin, C SW, Section 5-14-9w, Ellsworth County, is a wildcat location.

J. M. Brennan and R. E. Garden's No. 1 P. A. Decker, NW cor. NE NW, Section 11-20-3w, is a location in the Johnson Pool, in McPherson County.

J. Rogers and others' No. 1 Rainey, NE cor. SE SW, Section 3-21-6w, in the Welch Pool, Rice County, is a location.

Joe Liggett and others' No. 1 Rainey, NW cor. NE SE, Section 3-21-6w, Welch Pool, Rice County, was spudding. Four joints of 20-inch casing were driven through the quicksand.

Gled Oil Co. and Skelly Oil Co.'s No. 1 Frantz, C NW NW, Section 2-24-4w, was showing around 9,000,000 feet of gas a day, after being drilled to a total depth of 3,495 feet. It was also spraying oil as the well was being bailed and cleaned out. Tanks are to be erected and a production test made of the oil showing.

J. Mabee and others' No. 1 Martens, NE cor. SE, Section 19-22-3w, in the Hollow Pool, in Harvey County, was drilling at 3,250 feet, and expecting to reach the pay horizon by the end of the week.

Slick, Pryor and Lockhart and others' No. 1 Orth, SE cor. NE, Section 27-18-10w, Rice County, a wildcat, was given a production test and made 815 bbls. of oil in 10 hours, by pumping, through 3-inch tubing. The oil was found in the Siliceous lime at 3,236-43 feet.

Skelly Oil Co.'s No. 1 Leisman, C SE SW, Section 30-27-10w, Kingman County, found the Siliceous lime at 4,093-94 feet, and is preparing to underream the 5-inch casing to the top of the Siliceous lime at 4,093 feet where it will be cemented. The 5-inch casing was frozen at 4,079 feet. The test has had several showings of oil and gas in the shallower formations.

The Oil Man's Calendar

August

10—Nashville, Tenn., Tennessee Oil Men's Association, Noel Hotel.

22-26—Denver, Colo., American Chemical Society.

23-26—Spokane, Wash., Pacific Coast Gas Association, Hotel Davenport.

30—Cleveland, Ohio, National Air Races.

30-31—Cleveland, Ohio, Society of Automotive Engineers.

September

10-17—Cleveland, Ohio, Society of Automotive Engineers.

14-16—Atlantic City, N. J., annual meeting, National Petroleum Association.

15-17—Atlantic City, N. J., American Trade Association Executives.

21-23—Philadelphia, Pa., North American Gasoline Tax Conference.

21-22—Columbus, Ohio, Ohio Petroleum Marketers Association, Deshler-Wallick Hotel.

22-23—Chicago, National Association of Motor Bus Operators.

30-Oct. 1—Ponca City, Okla., American Institute of Mining and Metallurgical Engineers, Petroleum Division, Conoco Club.

October

3-7—Buffalo, N. Y., National Metal Exposition and National Metal Congress, and American Society for Steel Treating.

3-7—Washington, D. C., National Safety Council.

4-6—Toronto, Canada, Society of Automotive Engineers, transportation meeting.

10-14—Atlantic City, N. J., annual convention, American Gas Association.

11-12—Louisville, Ky., Kentucky Petroleum Marketers Association.

(?) —Chicago, Ill., American Society of Mechanical Engineers (fuel division).

November

10—Los Angeles, Calif., California Natural Gasoline Association.

10-12—Atlanta, Ga., Southeastern Economic Conference.

15-17—Houston, Tex., thirteenth annual meeting, American Petroleum Institute.

December

5—New Orleans, La., tenth annual Asphalt Paving Conference, and Association of Asphalt Paving Technologists.

5-9—New York, N. Y., American Society of Mechanical Engineers.

5-10—New York, N. Y., National Exposition of Power & Mechanical Engineering.

(?) —Great Falls, Mont., Rocky Mountain Oil and Gas Association, Rainbow Hotel.

(?) —Great Falls, Mont., Rocky Mountain Oil and Gas Association, Rainbow Hotel.

1933

April

20-21—Cleveland, Ohio, National Petroleum Association, Cleveland Hotel.

OPPOSE MARKETING CONTROL

Representatives of several oil marketing companies have appeared before the legislative commission of inquiry in opposition to the proposal to place the retail distribution of gasoline and lubricating oils under control of the Public Utilities Commission. The commission is investigating the gasoline prices and the oil company representatives have been questioned regarding leases, contracts and price schedules.

Frank D. Fitzgerald, secretary of state, has announced that recommendations will be made to the 1933 Legislature by the Department of State in favor of enactment of laws prescribing standards for the various grades of gasoline.

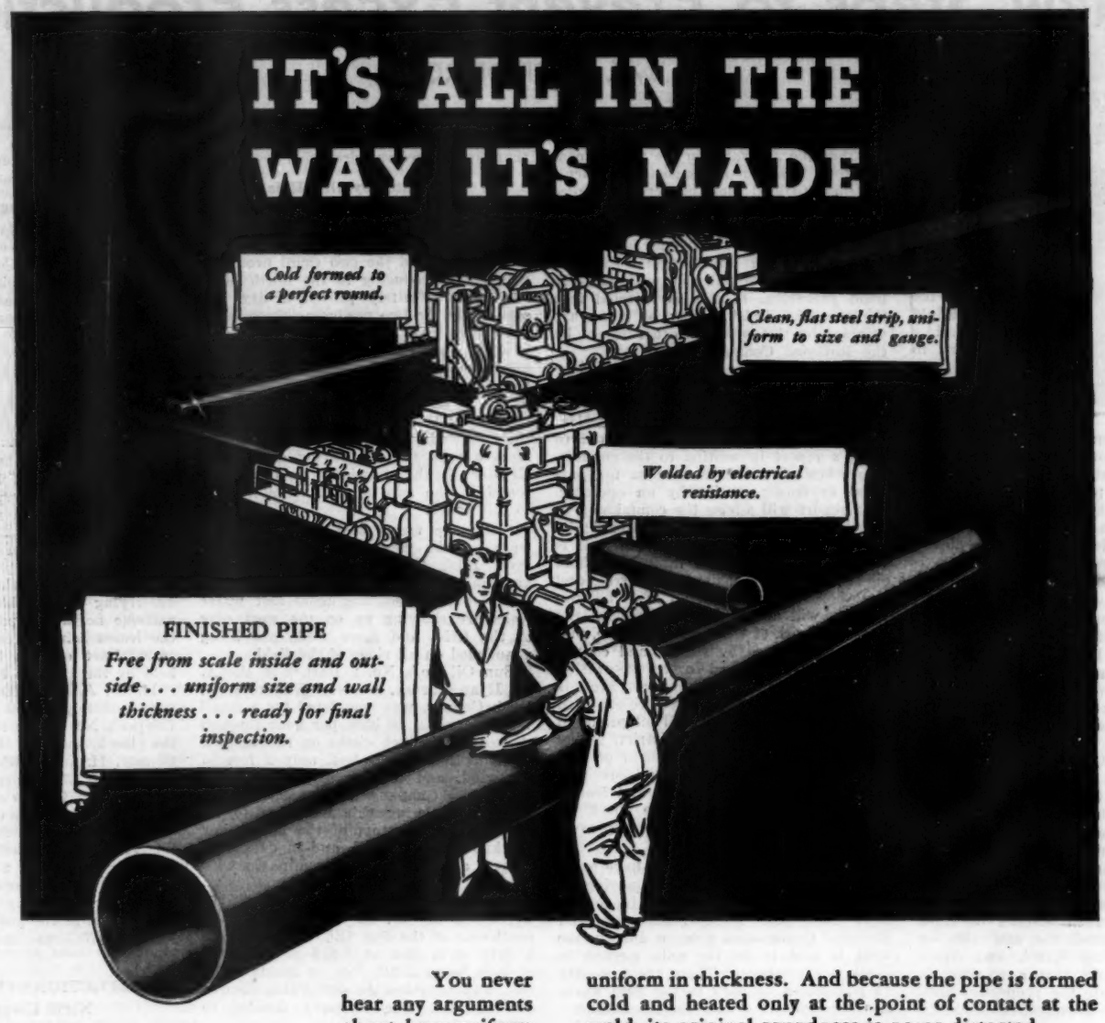
Mr. Fitzgerald claims that the motorist, if standard specifications were placed in the statute, would receive the protection of state inspection in obtaining the type of gasoline desired. Cutting and blending might be eliminated, at least for the motorist understanding the type of gasoline desired, it was said. It also was pointed out that each company now establishes without restriction its own sets of grades, which were said to vary widely.

WARREN D. JACOBS DIES

WAYNESBURG, Pa., Aug. 1.—Warren D. Jacobs of Marietta, Ohio, widely known in the oil industry throughout the tri-State region, died in a hotel here at the age of 81 after a short illness.

Mr. Jacobs was associated with many divisions of the Standard Oil Co. in the tri-State territory for more than 40 years and was in charge of many important oil developments in this region.

For several years Mr. Jacobs was at the head of all oil transportation and storage systems and field work for the Standard and affiliated companies, among them being the South Penn Pipe Line Co., the Eureka Pipe Line Co. of West Virginia and the Buckeye Pipe Line Co. of Ohio.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Clean, flat steel strip, uniform to size and gauge.
Welded by electrical resistance.
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Flat strip steel rolled to uniform thickness is formed cold to a perfect round. This is the only process which insures the inside surface of the pipe being exactly the same as the surface of the strip from which it is formed. Then the edges under pressure are welded by the electrical resistance method—Johnson patents owned by Republic. Because the steel strip is not heated it forms no scale—the finished pipe is clean inside and outside. Because the strip is of uniform gauge the wall of the pipe is absolutely uniform in thickness. And because the pipe is formed cold and heated only at the point of contact at the weld, its original roundness is never distorted.

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East Texas Allowable Is Reduced to 44 Barrels; New Steps to Prevent Excess Production

By L. E. BREDBERG

DALLAS, Tex., Aug. 1.—The per well allowable for East Texas was given another cut today, lowering the daily amount to 44 bbls., a 2-bbl. reduction from the past 12 days' well limit. There are now approximately 7,100 producers in the field, which would bring the daily maximum down to 312,400 bbls. per day if all of the wells were producing their allowable. But there are many wells which are not making their allowable due to lack of pressure, and insufficient saturation, and not having been put on the beam. But, on the other hand, there are many wells making more than their allowable, which puts production to an estimated 25,000 to 100,000 bbls. per day over the maximum 325,000 bbls. set by the Railroad Commission.

On July 28 penalty suits were filed by V. W. McDavid, district attorney of Rusk County, at Henderson, against the Golding-Murchison Oil Co. for alleged overproduction of oil. There were 10 suits filed against this company, which was recently taken over by the American-Liberty Oil Co., which is also a defendant. Dudley S. Golding, C. M. Johnson, trustee, and Clint W. Murchison are also involved in the suits, which aggregate $500,000 in penalties.

Mr. McDavid and Joe L. Hill, assistant Rusk County district attorney, acted for the Railroad Commission in filing these suits. The petition alleges that properties of Golding and Murchison, located mostly within the Henderson district of Rusk County, overproduced the allowable on several days during March and April. The State also asks that a receiver be appointed to operate the properties until judgment, if one is obtained, can be satisfied.

The State alleges that on May 25, 1932, Golding-Murchison Oil Co. transferred all of its properties to the American Liberty Oil Co., and therefore that the latter company is liable for penalties prior to the time it received the properties of Golding-Murchison Oil Co. in that penalties due at that time constituted a lien.

This is the first definite step to be taken by proration authorities in East Texas to collect penalties for overproduction, and many more suits are expected to be filed within a short time. District attorneys in counties where overproduction is alleged will try all suits of this nature.

The suit against the Golding-Murchison Oil Co. and the three individuals named as defendants is the largest penalty suit ever filed in Texas alleging violation of oil conservation regulations. The outcome will undoubtedly have a great effect on future proration. If the case is decided in favor of the commission it will add further to the prestige of the commission as when the three-judge Federal Court in the Constantin-Wrather injunction case, denied a temporary restraining order against the commission. However, that case may be tried again, this time "on its merits" on September 13. No injunctions are to be granted by the federal judges to operators who seek to obtain restraining orders against the commission's new per well orders, according to announcement made by Judge Randolph of Tyler.

When the case is tried again on September 13 it will be bitterly contested by both sides, the plaintiffs probably charging that the allowable in the field is confiscatory, making it extremely difficult for them to hold their properties because of the prevailing low price and repeated reductions in per well allowable.

Another feature which may be brought up at the trial is the marginal well law which exempts 40-bbl. per well pumpers from proration. If this is injected into the case the decision may be somewhat affected by this previous order issued by the Railroad Commission.

Requires Pipe Line Reports

Authorities are also trying to plug other loopholes to prevent overproduction. Pipe line companies will be required to make a report in writing to the commission when oil is tendered them for purchase or transportation by an operator. This report will advise the commission in detail, stating amount of oil offered; by whom it is offered, in what tanks oil is stored, location of such tanks, to whom oil is consigned, consignee's address, and for whose account such oil is to be run. Reports will also show the names of the leases, number of wells on each lease, and location of leases by survey and county from which oil offered for transportation was produced, or from which the same is to be produced. Such reports are expected to give full details as to all oil produced and transported from the district, giving the commission a daily statement of how much oil is being produced, and how produced in regard to all wells and leases, thereby giving it an absolute check on the daily production and preventing overproduction.

Another loophole which will have to be plugged is the shipping and moving of oil from wells by truck, mostly to the local refineries. More guardsmen and Railroad Commission men on duty in the field is said to be the only method to check this movement. There are now only 11 guardsmen on duty in the field working in co-operation with the commission.

Total distribution out of the district for the week ending July 29 was 365,000 bbls. per day. Daily average production for the same period was 330,610 bbls., showing a withdrawal of 34,481 bbls. per day from storage in the district.

Completions and Locations

Completions and locations continue to hold well above the 100 per week mark. There were 138 producers completed in the field this week, while 122 locations were staked, north Gregg County having the greatest number of both, while south Rusk County is now a close second to that most active area. There were 41 locations staked in south Rusk County and 43 wells completed in that area this week, while in north Gregg County there were 47 wells completed and 42 locations reported, showing the southern area is gaining over the northern area which has been exceedingly active for the past several months.

When fire in the Steen Drilling Co.'s No. 1 Loden in the G. W. Hooper Survey, Upshur County, was extinguished after six days of burning, pressures in all offset wells which were found to have been depleted while the fire raged, started to rebuild to their former stages. The well itself almost ceased to flow after several days of flowing wild and on fire, proving, as have other wells which were allowed to flow on proration tests, that pressures rapidly decrease, and to extremely small amounts, also causing pressures on offset wells to decrease, giving proof of what might be expected in the field if the wells were allowed to flow wide open or at much greater amounts than at the present proration levels.

Separated by Dry Hole

Hawkeye Petroleum Corp.'s No. 1 Mackey in the T. Hopkins Survey, midway between production on the north end of the field, and the two small producers which are producing to the north of it, has been definitely proved a dry hole separating the two producing areas, after cementing pipe and testing. Total depth is 3,763 feet. Elevation is 345 feet. Producers may be drilled to the east of this test to link up the two producing areas, but it is believed the break between the two areas will be continuous, and that the two wells to the north are producing from a separate oil bearing sand body. Greater depth at which production is found in the two outpost wells has led to this belief.

One more water well showed up this week on the west side of the Kilgore area, Rusk County, and one test was abandoned in this area. While pressures are gradually declining more salt water wells are showing up on the west edge of the field, and more wells are being abandoned on all sides of the field.

Sun Oil Co.'s No. 2 Barker in the A. M. Ryan Survey, western Kilgore area, Rusk County, was completed for a small well this week, 10 bbls. per hour through three-quarters inch choke on tubing at a total depth of 3,689 feet, only 2 feet in the sand, and making 4 per cent salt water. The company was extremely careful in completing this well due to its standing with bottom of the hole below the known water level, and in danger of a large amount of water coming in with the oil.

Webb Petroleum Co.'s No. 1 M. R. Terrell in the W. R. Cook Survey, and southwest of the Sun Oil Co. well, made a drill stem test at 3,694 feet, bottom of hole being 3,695 feet or minus 3,320 feet, and considerable salt water showed on the test. The company decided to abandon it.

Another central power pumping unit is being installed in the Joiner area, Rusk County, the area in which the greatest number of pumpers is located. The Sun Oil Co., which has three wells on its E. Till lease in the M. V. Pena Survey which require agitation by swab to start them flowing every day, is installing a power unit on this lease for these and other wells which will be drilled on it.

Salt Water Wells

The latest reports from the field show south Rusk County to have 20 salt water wells, north Rusk County, 26; Smith County, 17; Gregg County, 30, and Upshur County, 19, making a total of 112 wells which are, or have made different percentages of salt water. One more added this week brings the total up to 113. There are now 149 pumping and wells standing "dead" in the field.

Shell Petroleum Corp. has farmed out its 133-acre Fisher lease in the John Ruddle Survey on the east side of the Gregg County area to L. C. Collins, retaining a five-sixteenths overriding royalty. Collins is obligated to drill two wells on the lease immediately.

J. H. Burke has sold his 40-acre D. Bruner lease in the M. Chandler Survey, Upshur County, to H. K. Spear for a one-fourth overriding royalty.

In writing about the western Kilgore area Wyche Brothers' No. 1 Charles Arnold in the Peter Holmes Survey was omitted. This test topped the sand at 3,709 feet and was swabbed, but failed to produce any showing of oil. Total depth is 3,712 feet. It will probably be abandoned at this depth, making the second failure for this area during the week

Wildcatting Activities

Three wildcat tests were started in the district during the week, one each in Hill, Smith and Trinity Counties. T. J. Spikes staked location for his No. 1 M. H. Davis in the J. R. Alexander Survey, 2 miles southwest of Hubbard, in Hill County. McRabie and others have started a test on their C. P. Hamilton lease in the Jackson Rector Survey, 4½ miles north of Troupe in Smith County. The Scientific Petroleum Co. has made location on its T. H. Haynes lease in the I.&G.N. Survey, Trinity County.

George L. Pace abandoned his location on the D. Walcott farm in the D. A. Russell Survey, Morris County. Collins & Plummer completed their No. 2 Collins for a dry hole at 5,225 feet. This test is 7 miles southeast of Livingston in Polk County.

McCaskey and others of Fort Worth are trying to assemble 7,000 acres in the extreme northwest part of Cass County, the leases being taken on a drilling contract. Part of this block was formerly held by the Phillips Petroleum Co.

H. W. Ashby of Dallas has purchased approximately 10,000 acres of leases near Harper's No. 1 Fee in Franklin County, the block running over into Hopkins County. H. W. Smith has purchased approximately 2,000 acres along the same line of play. Harper's No. 1 Fee is fishing for a slip around 3,285 feet.

Lemmon & Richardson have taken over the Hal Wood 3,500-acre block in the Sanches Survey, 3 miles north of New Salem in Rusk County, and Cranfill & Reynolds are fishing in their 3,000-acre block south of the above, centering in the W. H. Walters and H. M. Hoover Surveys.

COMPLETIONS IN EAST TEXAS

North Gregg County

Arkansas Fuel Oil Co.'s No. 4-B J. W. Harrison, top sand 3,549 feet, initial production 49 bbls. in 15 minutes through three-fourths inch tubing choke, total depth 3,573 feet; No. 5-C F. K. Lathrop, top sand 3,561 feet, initial production 27 bbls. in 15 minutes through 1-inch tubing choke, total depth 3,582 feet; No. 2 C. L. Taylor, top sand 3,542 feet, initial production 46 bbls. in 15 minutes through 1-inch tubing choke, total depth 3,566 feet. Arrow Drilling Co.'s No. 1 W. M. Borrough, top sand 3,518 feet, initial production 46 bbls. in 22 minutes through 2-inch tubing, total depth 3,554 feet. Atlantic Oil Producing Co.'s No. 11-A Burnside, top sand 3,500 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,530 feet; No. 3 Castleberry, top sand 3,564 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,624 feet. Atlantic and Stanolind Oil & Gas Co.'s No. 3 Fishburn, top sand 3,486 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,520 feet. Atlantic Oil Production Co.'s No. 6 McBee Fisher, top sand 3,477 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,505 feet. Atlantic and Sun Oil Co.'s No. 14 M. Hays, top sand 3,512 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,558 feet. Atlantic Oil Production Co.'s No. 6 Judge, top sand 3,500 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,526 feet; No. 9 Judge, top sand 3,481 feet, initial production 64 bbls. per hour

through tapered tubing, total depth 3,518 feet; No. 18 Judge, top sand 3,511 feet, initial production 180 bbls. per hour through 2½-inch tubing, total depth 3,532 feet; No. 8 J. M. Moore, top sand 3,499 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,525 feet; No. 16 J. M. Moore, top sand 3,514 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,534 feet. Atlantic and Sun Oil Co.'s No. 5-C R. C. Barnswell, top sand 3,485 feet, initial production 22 bbls. per hour through three-fourths inch tubing choke, total depth 3,528 feet. Atlantic Oil Production Co.'s No. 16 M. Hays, top sand 3,510 feet, initial production 66 bbls. per hour through tapered tubing, total depth 3,555 feet.

Beard and others' No. 3 Fuller, top sand 3,582 feet, initial production 46 bbls. per day pinched, total depth 3,725 feet. Brown Eagle Oil Co.'s No. 1 T.&P., top sand 3,599 feet, initial production 46 bbls. per day pinched, total depth 3,620 feet. New Process Production Co.'s No. 1 George Anderson, top sand 3,498 feet, initial production 75 bbls. in 30 minutes through 2-inch tubing, total depth 3,535 feet. Empire Gas & Fuel Co.'s No. 9 J. Bander, top sand 3,555 feet, initial production, no gauge, total depth 3,622 feet; No. 8 T. W. Lee, top sand 3,552 feet, initial production 32 bbls. in 15 minutes through 2-inch open tubing, total depth 3,563 feet. Foshee and others' No. 2 fee, top sand 3,680 feet, initial production 65 bbls. in 30 minutes through 2-inch open tubing, total depth 3,686 feet.

Graisham & Hunter's No. 1-F T.&P. Railroad, top sand 3,625 feet, initial production 40 bbls. in one-quarter hour through tubing, total depth 3,648 feet. Gulf Production Co.'s No. 8 A. V. Bacle, top sand 3,617 feet, initial production 60 bbls. per hour through three-quarter inch tubing choke, total depth 3,645 feet; No. 18 Judge, top sand 3,485 feet, initial production 82 bbls. per hour through three-quarter inch tubing choke, total depth 3,512 feet; No. 19 Judge, top sand 3,490 feet, initial production 72 bbls. per hour through three-quarter inch tubing choke, total depth 3,515 feet; No. 26 Judge, top sand 3,537 feet, initial production 80 bbls. per hour through three-quarter inch tubing choke, total depth 3,564 feet; No. 8 Lacy-Snider, top sand 3,500 feet, initial production 72 bbls. per hour through three-quarter inch tubing choke, total depth 3,528 feet; No. 14 Sheppard, top sand 3,483 feet, initial production 80 bbls. per hour through three-quarter inch tubing choke, total depth 3,513 feet; No. 15 Sheppard, top sand 3,479 feet, initial production 84 bbls. per hour through three-quarter inch tubing choke, total depth 3,506 feet.

D. W. Henkle and others' No. 1 C. L. Taylor, top sand 3,477 feet, initial production 100 bbls. in one-half hour through open 2½-inch tubing, total depth 3,527 feet. Humble Oil & Refining Co.'s No. 1 J. M. Adams, top sand 3,462 feet, initial production 77 bbls. per hour through three-quarter inch tubing choke, total depth 3,476 feet. Lucey Petroleum Co.'s No. 3 Kensell, top sand 3,612 feet, initial production 120 bbls. per hour through 2-inch tubing, total depth 3,660 feet.

Magnolia Petroleum Co.'s No. 4 G. W. Richey, top sand 3,628 feet, initial production 120 bbls. per hour through 2-inch tubing choke, total depth 3,659 feet. Margay Oil Co.'s No. 3 Freeman, top sand 3,696 feet, initial production 38 bbls. in one-quarter hour through 1-inch tubing choke, total depth 3,722 feet. Meridian Oil Co. and Peyton's No. 6 T. W. Lee, top sand 3,592 feet, initial production 185 bbls. per hour through 2-inch tubing, total depth 3,652 feet. Pilot Oil Co.'s No. 5 Harris, top sand 3,501 feet, initial production 46 bbls. in 23 minutes through 1-inch tubing choke, total depth 3,524 feet.

Selby Oil & Gas Co.'s No. 4 A. Miller, top sand 3,593 feet, initial production 37 bbls. in one-half hour through tubing, total depth 3,597 feet. Shell Petroleum Corp.'s No. 8 E. Burnside, top sand 3,484 feet, initial production 15 bbls. in one-half hour through 1¼-inch tubing, total depth 3,546 feet; No. 5 T. B. Stinchomb, top sand 3,463 feet, initial production 15 bbls. in one-half hour through 1 and 1½-inch tubing chokes, total depth 3,512 feet. Sinclair Prairie Oil Co.'s No. 6-B J. E. Akin, top sand 3,571 feet, initial production 25 bbls. in 10 minutes through open 2½-inch tubing, total depth 3,615 feet. Sun Oil Co.'s No. 2 J. C. Campbell, top sand 3,503 feet, initial production 40 bbls. per hour through tapered tubing, total depth 3,536 feet; No. 9 J. M. Haynes, top sand 3,586 feet, initial production 27 bbls. in one-quarter hour through 2½-inch open tubing, total depth 3,660 feet. The Texas Company's No. 5 T. W. Lee, top sand 3,535 feet, initial production 112 bbls. per hour through 1-inch tubing choke, total depth 3,562 feet.

Yount-Lee Oil Co.'s No. 5 P. Hopkins, top sand 3,521 feet, initial production 78 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,541 feet; No. 4 F. Smith, top sand 3,496 feet, initial production 773 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,516 feet; No. 4-C S. G. Smith, top sand 3,558 feet, initial production 80 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,578 feet.

South Gregg County

Carroll and Blain's No. 2 L. P. Griffin, top sand 3,543 feet, initial production 65 bbls. per hour through three-fourths inch tubing choke, total depth 3,590 feet. Chaplin and Bass' No. 3 Walton, top sand 3,573 feet, initial production 80 bbls. per hour through three-fourths inch tubing choke, total depth 3,596 feet. W. J. Collins' No. 2 H. T. Elder and Son, top sand 3,590 feet, initial production 130 bbls. per hour through three-fourths inch tubing choke, total depth 3,618 feet.

Gulf Production Co.'s No. 13 H. C. Alexandria, top sand 3,527 feet, initial production 80 bbls. per hour through three-fourths inch tubing choke, total depth 3,543 feet; No. 28 Hilburn estate, top sand 3,633 feet, initial production 70 bbls. per hour through three-fourths inch tubing choke, total depth 3,643 feet; No. 34 Hilburn estate, top sand 3,539 feet, initial production 90 bbls. per hour through three-fourths inch tubing choke, total depth 3,559 feet; No. 16 A. Spear, top sand 3,532 feet, initial production 80 bbls. per hour through three-fourths inch tubing choke, total depth 3,550 feet; No. 4 E. L. Walker, top sand 3,530 feet, initial production 50 bbls. per hour through three-fourths inch tubing choke, total depth 3,551 feet.

McBride and others' No. 1 J. M. Dixon, top sand 3,545 feet, initial production 150 bbls. in 2½ hours through open 2-inch tubing, total depth 3,625 feet. Liner, Inc.'s No. 2-I Clayborn, top sand 3,688 feet, initial production 45 bbls. per hour through open 2-inch tubing, total depth 3,692 feet. Magnolia Petroleum Co.'s No. 2 N. Towles, top sand 3,649 feet, initial production 112 bbls. per hour through open 2-inch tubing, total depth 3,658 feet. Russell Petroleum Co.'s No. 1 C. C. Crews, top sand 2,589½-feet, initial production 52 bbls. per hour through open 2-inch tubing, total depth 3,591 feet. Phillips and others' No. 1 Barcus, top sand 3,719 feet, initial production 40 bbls. per hour through open 2-inch tubing, total depth 3,722 feet. Rejo Oil Corp.'s No. 4 A. C. McCommic, top sand 3,700 feet, initial production 16 bbls. in 20 minutes through three-fourths inch tubing choke, total depth 3,702 feet. Red Star Oil Co.'s No. 1 Willie Smith, top sand 3,526 feet, initial production 75 bbls. per hour through three-fourths inch tubing choke, total depth 3,573 feet. Russell Petroleum Co.'s No. 1 Duncan, top sand 3,535 feet, initial production 25 bbls. per hour through open 2-inch tubing, total depth 3,586 feet.

Selby Oil & Gas Co. and Lewis Production Co.'s No. 5 M. T. Cole, top sand 3,524 feet, initial production 84 bbls. in 30 minutes through open 2-inch tubing, total depth 3,562 feet. Sinclair Prairie Oil Co.'s No. 18-B A. A. King, top sand 3,438 feet, initial production 30 bbls. in 10 minutes through 2½-inch tubing, total depth 3,460 feet; No. 8-B A. A. King, top sand 3,436 feet, initial production 50 bbls. in 15 minutes through open 2½-inch tubing, total depth 3,470 feet. Stanolind Oil & Gas Co.'s No. 3-B E. L. Walker, top sand 3,543 feet, initial production 47 bbls. in 15 minutes through tubing, total depth 3,555 feet. Sun Oil Co.'s No. 12 M. T. Cole, top sand 3,509 feet, initial production 48 bbls. per hour through open tapered tubing, total depth 3,555 feet; No. 6 William Penticost, top sand 3,607 feet, initial production 46 bbls. per hour through open tapered tubing, total depth 3,651 feet; No. 8 Grant Reese, top sand 3,637 feet, initial production 47 bbls. per hour through open tapered tubing, total depth 3,649 feet. The Texas Company's No. 5 S. D. Walker, top sand 3,578 feet, initial production 15 bbls. per hour through open 2½-inch tubing, total depth 3,587 feet. Welch and Sandler's No. 3 Barnett, top sand 3,735 feet, initial production 135 bbls. per hour through 1-inch tubing choke, total depth 3,736 feet.

North Rusk County

Empire Gas & Fuel Co.'s No. 8 C. O. Christian, top sand 3,710 feet, initial production 30 bbls. in 15 minutes through 2-inch tubing choke, total depth 3,718 feet. Everts Drilling Co.'s No. 4 Crews, top sand 3,828½ feet, initial production 30 bbls. in 15 minutes through open tubing, total depth 3,830 feet. Graner Oil Co.'s No. 1 D. C. Warren, top sand 3,796 feet, initial production 46 bbls. per day pinched, total depth 3,798 feet. Great Western Oil Co.'s No. 2 Birdsong, top sand 3,614 feet, initial production 65 bbls. per hour through three-fourths inch tubing choke, total depth 3,640 feet. Humble Oil & Refining Co.'s No. 6-A J. T. Sexton, top sand 3,676 feet, initial production 60 bbls. per hour through three-fourths inch tubing choke, total depth 3,754 feet.

Kirby Petroleum Co.'s No. 5 Reddie, top sand 3,610 feet, initial production 60 bbls. per hour through open 2-inch tubing, total depth 3,712 feet. Louisiana Oil & Refining Co.'s No. 2 W. M. Jernigan, top sand 3,685 feet, initial production 35 bbls. per hour through 1-inch tubing choke, total depth 3,710 feet. Sampson and Crane's No. 1 T. H. Gill, top sand 3,628 feet, initial production 78 bbls. per hour through three-fourths inch tubing choke, total depth 3,629 feet.

Sun Oil Co.'s No. 2 E. S. Barker, top sand 3,687 feet, initial production 10 bbls. per hour through three-quarters-inch tubing choke, 4 per cent salt water, total depth 3,689 feet, A. M. Ryan Survey. Webb Petroleum Co.'s No. 1 M. R. Terrell, top sand 3,694 feet, dry and abandoned, total depth 3,693 feet, W. R. Cooke Survey.

South Rusk County

Adams and Lyles' No. 2 L. P. Thrash, top sand 3,759 feet, initial production 20 bbls. in one-quarter hour through open 2½-inch tubing, total depth 3,764 feet. Aston Oil Co.'s No. 5 J. R. Alford, dry and abandoned, total depth 1,125 feet. Blackwell Oil & Gas Co.'s No. 7 W. P. Moore, top sand 3,621 feet, initial production 150 bbls. per hour through open 2½-inch tubing, total depth 3,639 feet. Bristol and Thomas' No. 2 London School, top sand 3,760 feet, initial production 120 bbls. per hour through tapered tubing, total depth 3,806 feet. Combined Oil Interests' No. 13 O. W. Eaton, top sand 3,727 feet, initial production 55 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,747 feet. Conservative Oil Co.'s No. 6-A Lizzie Harmon, top sand 3,775 feet, initial production 95 bbls. per hour through three-quarters inch tubing choke, total depth 3,805 feet.

Deep Rock Oil Co.'s No. 12 Stovall, top sand 3,590 feet, initial production 108 bbls. per hour through open 2½-inch tubing, total depth 3,660 feet. Duncan and Holt's No. 4 R. A. Motley, top sand 3,804 feet, initial production 45 bbls. in one-half hour through open 2-inch tubing, total depth 3,807 feet. East Texas Refining Co.'s No. 2 J. B. Wilson, top sand 3,609 feet, initial production 120 bbls. per hour through open 2-inch tubing, total depth 3,626 feet. Florence Oil Co.'s No. 1 R. A. Motley, top sand 3,812 feet, initial production 80 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,817 feet.

Gant and Garwin's No. 1 W. P. Moore, top sand 3,502 feet, initial production 45 bbls. per hour through open 2-inch tubing, total depth 3,603 feet. Golding and Murchison's No. 8 Fair, top sand 3,607 feet, initial production 106 bbls. per hour through open 2-inch tubing, total depth 3,627 feet. Gulf Production Co.'s No. 5 L. P. Thrash, top sand 3,690 feet, initial productioin 80 bbls. per hour through three-quarters inch tubing choke, total depth 3,710 feet. John W. Hoosier's No. 2 L. Jones, top sand 3,762 feet, initial production 60 bbls. in one-half hour through open 2-inch tubing, total depth 3,781 feet. Humble Oil & Refining Co.'s No. 3 S. A. Glover, top sand 3,683 feet, initial production 25 bbls. per hour through three-quarters inch tubing choke, total depth 3,783 feet; No. 8 C. J. Thompson, top sand 3,674 feet, initial production 96 bbls. per hour through three-quarters inch tubing choke, total depth 3,696 feet. Lion Oil & Refining Co.'s No. 4 Jobe, top sand 3,606 feet, initial production 35 bbls. per hour through open 2-inch tubing, total depth 3,690 feet. Merry Brothers and Perini's No. 2-A J. M. Price, top sand 3,636 feet, initial production 45 bbls. in one and one-half hours through 2-inch tubing, total depth 3,668 feet.

Mid-Kansas Oil & Gas Co.'s No. 8 H. C. and G. W. Burton, top sand 3,648 feet, initial production 88 bbls. per hour through 2-inch tubing, total depth 3,682 feet; No. 28 M. M. Cross, top sand 3,618 feet, initial production 148 bbls. per hour through tubing, total depth 3,639

(Continued on Page 47)

East Central Texas Wildcats

Week Ending August 1

Company, well, farm name, section and block—	Remarks:
ANDERSON COUNTY	
Frazier et al's No. 1 H. L. Hudson, 200 ft. from S line and 200 ft. from W line of 196-ac. tract, M. Rionda Sur.	Preparing to spud.
Roeser and Pendleton's No. 1 M. A. Davy, 660 ft. from N line and center of E and W lines of tract and survey, P. G. Adams Sur.	Derrick.
C. R. Wilmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in S½ of 129-ac. tract, M. Main Sur.	T.D. 1,538 ft.
BOWIE COUNTY	
Roy Anderson's No. 1 Dykes, 2 miles W of Texarkana, M. Dykes Sur.	Drlg. 850 ft.
Burnham-Robertson and Greer's No. 1 F. O. Weiss, 850 ft. from N line and 200 ft. from W line of B. H. Williams 50-ac. tract, Jessie Dean Sur.	Drlg. 3,710 ft.
CHEROKEE COUNTY	
Bridges and Candler's No. 1 Berryman, center of Berryman tract, H. Kimble Sur.	[illegible] 1,000 ft.
Davis et al's No. 1 Annie Kelley, 330 ft. from N line and center of E and W lines of 21.4-ac. lease, M. D. L. S. Coy Sur.	Waiting on cmt. to set 3,512 ft.
Patton-Oliver and Murray's No. 1-A Eddie Toole, skidded derrick 20 ft. W of No. 1 Toole, M.D.L.S. Coy Sur.	Derrick.
Rayburn and Glassco's No. 1 Annie Kelley, 1,714 ft. S and 2,210 ft. W of NW cor. of Pilot Oil Co.'s Kelley 10-ac. lease, M. De Los Santos Coy Sur.	Drlg. 2,010 ft.
Merry Bros. and Perini's No. 2 Annie Kelley, S offset to Pilot Oil Co.'s No. 1 Kelley, M. D. L. S. Coy Sur.	Rig up.
Mid-Kansas Oil & Gas Co.'s No. 20 M. M. Cross, 330 ft. from N and W lines of survey, E. B. Foulkes Sur.	Derrick.

(Continued on Page 38)

Three Interesting Ward County Wildcat Tests; Archer County Gets Four New Locations

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 1.—The Big Lake Field, Reagan County, now has 10 Ordovician producers. Big Lake Oil Co.'s No. 6-C University, located in Section 12, Block 2, came in flowing 1,182 bbls. of high gravity sweet crude during the first 16 hours from a total depth of 8,836 feet. It also made over 28,000,000 feet of gas with the oil. It will no doubt increase in production as drilling mud and water is cleaned by the gas pressure and oil flow. The first deep pay was topped at 8,231 feet, but losing a bailer caused a long fishing job which has held up drilling and completion of the well. The well extends the deep production to the northwest. Two other deep wells are now drilling in the pool, one by the Big Lake Oil Co. and one by Group No. 1 Oil Corp. and Continental Oil Co.

Ward County

There are three interesting wildcat tests drilling in Ward County. These are: Simms Oil Co. and Plains Producing Co.'s No. 1 Benton land, 2 miles north and a half mile west of the Delaware discovery producer in western Ward County; Penn Oil Co. and others' No. 1 York, between the Penn-Atlantic Bennett and the Bradford-York Pools in southern Ward, and Renaud & Prettyman's No. 1 University, near the Gulf Production Co.'s O'Brien block in northern Ward County. It is in Section 4, Block 16, T.&P. Railroad Survey. The York test is in Section 10, Block 34, H.&T.C. Survey. The first mentioned well has about 500 feet to drill before picking up the Loving County pay horizon found in the western Ward County discovery well. All three tests should be drilled in within two weeks, if they make producers from the same pay horizons found in the nearby wells.

Ector County

Four tests are active in Ector County, all of them drilling in wildcat territory, and therefore extremely interesting to those who are watching this county for results. L. C. Harrison and others' No. 1 Addis, in Section 35, Block 43, Township 2s, T.&P. Survey, has practically only begun drilling, as has Broderick & Calvert and others' No. 1 J. E. Parker, in Section 15, Block 44, Township 2s. D. D. Thomas, James L. Green and R. L. York's No. 1 Will Edwards, in Section 38, Block 43, Township 3s, is fishing for tools, and should soon reach the proposed depth when tools are fished out and drilling resumed. It is standing at 3,200 feet in anhydrite.

H. L. Wurts' No. 1 Ibbetson in Section 16, Block 46, G.M.M.B.&A. Survey, in southwestern Ector, is drilling on iron, total depth 3,610 ft.

Runnels County

Blue Bonnett Petroleum Co.'s No. 1 R. S. McMillan, in Block 22, N. Travis Survey, Runnels County, has put 584 bbls. in storage during the past two weeks, oil being trucked to the Concho Refining Co.'s plant at San Angelo. The well is flowing around 70 bbls. per day with some cavings in the hole. Total depth is 2,522 feet, and 6⅝-inch casing was set at 2,272 feet with line run to 2,507 feet. The well extends production to the north in the pool in which there has been no drilling for two years.

The Third Court of Civil Appeals has set October 5 to hear arguments on what is known as the "California case" which involves the Douglas Oil Co. and the State of Texas, and about 200 acres of land in Section 34, Block 194, in the Yates Field, Pecos County. Fourteen weeks were consumed in the Travis County district court when the case was tried. Several millions of dollars in oil payments are involved in this suit, and are being held by the producers on the land pending the final outcome of the case.

Loving County

The Active Oil Corp., a Chicago distributor, is laying a 3-inch pipe line from the Phillips Petroleum Co.'s lease in the Wheat Pool, Loving County, to the Mentone Refining Co.'s 1,500-bbl. refinery at Arno, which the former company may operate. This is the third outlet for the field, which produced high gravity sweet oil.

RANGER AND WICHITA FALLS

The Deep Oil Development Co. has made locations for four tests in Archer County, two of which are to be Canyon tests in the Chalk Hill area, a third to be a Strawn sand test to offset, diagonally to the northeast, the company's No. 1 Munger, 3,800-foot Strawn producer. A fourth test is to be a shallow one, offsetting a shallow wildcat producer in the central part of the county.

W. B. Hamilton's No. 1 Cartwright is the second well in the new pool which was recently opened by the same company's No. 1 Ikard a short time ago, in Archer County. The second test topped the Gunsight lime at 1,159 feet, the hard lime showing oil at 1,162-67 feet, soft saturated lime at 1,167-81 feet. It was shot with 70 quarts from 1,162-81 feet and is estimated good for 50 bbls. on the pump. It is now rigging up pump.

Deep Oil Development Co.'s No. 5-B Wilson, in Lot 4, Block 75, A.T.N.C. Survey, Archer County, is to be one of the tests to be drilled to the Canyon series. No. 1 Wilson, on Lease 18, Lot 4, will also go to the Canyon series.

Burns & Long's No. 1-T Wilson, in Archer County, which has been plugged back to 2,228 feet to shut off water, was completed for an initial production of 172 bbls. of oil and 14½ bbls. of water, plugging back not entirely shutting off the water. Oil sand was logged from 2,226-33 feet in this test. Elevation is 964 feet. It is in the Chalk Hill area.

Bridwell Oil Co.'s No. 1 W. B. Gist, a slight extension well to an old producing area in Montague County, was completed this past week for an initial production of 72 bbls., with 1 bbl. of water. It logged oil sand from 1,247-53 feet, and was completed at 1,257 feet. The same company's No. 3 Brown, due north offset to this new well, is drilling below 1,400 feet with no showings of oil or gas, showing the erratic conditions found in this area.

George F. Robertson of Dallas has erected a rig in east central Childress County, on a large block, and will drill a 3,500-foot test.

The Texas Railroad Commission has set a hearing on August 9 in Austin to hear application of certain oil operators in Jack County for modification of Rule 37. Under this rule wells must be spaced 150 feet apart and 330 feet from property lines. The application asks that the distances be increased to 330 feet and 660 feet, respectively.

Wildcat Operations in West Texas

Week Ending August 1

BORDEN COUNTY

Company, well, farm name, section and block—	Remarks—
Westyde Investment Co.'s No. 1 Looney, 990 ft. from S and E, Sec. 15, Blk. 31, Twp. 4s, T.&P. Sur.	Drlg. 605 ft.

BREWSTER COUNTY

Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	S.D. 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	S.D. 1,303 ft.
Joiner's No. 1 McIntire, 853 ft. from S and 2,390 ft. from E, Sec. 31, Blk. 352, W. J. Mitchell Sur.	Rigging up cable tools.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,560 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur.	S.D. 2,900 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine	S.D. 1,750 ft.

CONCHO COUNTY

Beesley et al's No. 1 Waring Estate, 400 ft. from N and E. Sec. 163, T.&N.O. Sur.	S.D. 1,700 ft.
Simmons et al's No. 1 Schultz, 150 ft. from W and center N and S of E half of J. Weber Sur., Abst. 154.	Rigging up.

CROCKETT COUNTY

Doleman & Moore's No. 1 Ferner, 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur.	Spudded and S D.
Stanolind Oil & Gas Co. et al's No. 1 Todd, 1,370 ft. from N and 1,320 ft. from E, Sec. 67, Blk. UV, G.C.&S.F. Sur.	Drlg. 815 ft.
The Texas Company's No. 1 B. B. Ingham, 330 ft. from S and 2,310 ft. from E line, Sec. 36½, I.&G.N. Sur.	S.D. 1,000 ft.
J. D. Young Co.'s No. 1 Shannon, 330 ft. from N and W, Sec. 35, Blk. 1, G.C.&S.F. Sur.	Location.

COKE COUNTY

Mid-Kansas Oil & Gas Co.'s No. 1 Hearn, 980 ft. from S and W, Sec. 271, Blk. 1-A, H.&T.C. Sur.	Drlg. 3,180 ft.

DAWSON COUNTY

Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R. Sur.	Shut down.

ECTOR COUNTY

Broderick & Calvert's No. 1 Parker, 330 ft. from N and W, Sec. 15, Blk. 44, Twp. 2s, T.&P. Sur.	Drlg. 615 ft.
Duffey et al's No. 1 Rutledge, 990 ft. from S, 330 ft. from E, Sec. 7, Blk. B-15	Location.
L. C. Harrison et al's No. 1 Addis, 330 ft. from N and 1,320 ft. from W, Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.	Drlg. 730 ft.
Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 38, Blk. 43, Twp. 3s, T.&P. Sur.	Fsg. 3,200 ft.
H. F. Wurts' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G. M. M.Br.&A. Sur.	Drlg. on iron 3,605 ft.

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,335 ft. from S and E lines Sur. 254, S.F. No. 7,247	S.D. 2,850 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 1 George, 400 ft. from N and 330 ft. from E. Sec. 300, Blk. 1, B.B.B.&C. Sur.	S.D. 5,816 ft.
Southern Oil Co.'s No. 1 Purdue, 990 ft. from S and E Sec. 202, Blk. B, B.B.&C. Sur.	Drlg. 1,510 ft.

GAINES COUNTY

McElreath et al's No. 1 Sparks, 330 ft. from N and E Sec. 397, Blk. G	T.D. 3,087 ft.; 9-in. csg. cmtd.; standardizing.

GLASSCOCK COUNTY

California Co.'s No. 1 O'Byrne, 2,310 ft. from S, 1,650 ft. from E, Sec. 23, Blk. 33, Twp. 2-s, T.&P. Sur.	Fsg. csg. 1,540 ft.
Continental Oil Co.'s No. 2 Hart-Phillips, 660 ft. from N, 1,980 ft. from W, Sec. 34, Blk. 33, Twp. 2-s, T.&P. Sur.	Spudding.
B. C. Mann's No. 1 Moore, C NE, Sec. 11, Blk. 36, Twp 3s, T.&P. Sur.	Fsg. 575 ft.

HOWARD COUNTY

American-Maracaibo's No. 5-A Settles, 1,320 ft. from N, 1,334 ft. from W, Sec. 6, Blk. 32, T.&P. Sur.	S.D. 185 ft.

(Continued on Page 39)

PANHANDLE

The Finley-Brown Pool, Gray County, was extended nearly a half mile this week when the Mazda Oil Corp.'s No. 2 Combs-Worley came in flowing 65 bbls. high gravity oil per hour, with a large amount of gas from the granite wash pay logged from 2,860-2,975 feet. First gas was encountered at 2,450-2,585 feet, and 17,500,000 feet of gas was gauged at 2,590 feet. It is in Section 35, Block 3, I.&G.N. Survey.

COMPLETIONS IN WEST TEXAS DISTRICT

Glasscock County

Lawson and others' No. 1 Edwarsd, top pay 2,112 feet, initial production 91 bbls. per hour for two hours, total depth 2,125 feet.

Pecos County

Cardinal Oil Co.'s No. 12-E Tippett, top pay 465 feet, initial production 62 bbls. of fluid in six hours, pumping 65 per cent salt water, total depth 466 feet. Culberson Brothers' No. 12-B Monroe, top pay 484 feet, initial production 90 bbls. pumping total depth 494 feet.

Ward County

Moran and others' No. 2 Sweatt, top pay 2,182 feet, initial production 30 bbls., total depth 2,232 feet. Richardson and others' No. 5 O'Brien, top salt 1,135 feet, top lime 2,315 feet, top pay 2,523 feet, initial production 75 bbls., total depth 2,835 feet. Adams and others' No. 1 Scarborough, top pay 2,820 feet, initial production 124 bbls. in 24 hours, total depth 3,175 feet.

COMPLETIONS IN PANHANDLE DISTRICT

Carson County

Gulf Producing Co.'s No. 1-B Garner (old well deepened), old total depth 3,195 feet, was making 8 bbls., new total depth 3,211 feet, initial production 57 bbls. Pulse-Shell Petroleum Corp.'s No. 1 Byrum, top pay 3,070 feet, shot 200 quarts 3,068-3,180 feet, initial production 150 bbls.

Gray County

Gulf Production Co.'s No. 1-A Bowers (old well deepened), old total depth 3,021 feet, well was dead, new total depth 3,072 feet, initial production 64 bbls. on pump. The Texas Company's No. 10 Williams, top pay 2,640 feet, initial production 939 bbls. with 7,500,000 feet of gas, total depth 2,739 feet.

BALANCE

This illustration is made from an actual photograph of Tru-Lay Preformed Wire Rope. Only in Preformed Wire Rope will the strands and wires stay in position without seizing or tying the end as this photograph reveals.

"High-stranding" and "low-stranding," are wire rope faults well familiar to men who pay the bills for wire rope. Equal strand loads, as obtained in Tru-Lay Preformed Wire Rope, is an important advantage.

PERFECT BALANCE OF TENSION NECESSARY TO INSURE EQUAL LOADING OF STRANDS

A high strand (underloaded) is quickly crushed and destroyed. A low strand (overloaded) soon parts, leading also to rapid wire rope destruction.

In Tru-Lay, strands and wires are preformed to the exact shape they assume in the finished rope structure. They lie naturally in position—inherently adjusted to each other, so when the rope is put to work each strand carries an equal share of the load. Resistance to high and low-stranding is one of the many cardinal reasons why Tru-Lay Preformed Wire Rope wears so much longer.

There is no straightening out tendency in Tru-Lay—no internal stress. This results in less fatiguing action, longer life, easier handling, greater flexibility, just to mention a few of the advantages of TRU-LAY Preformed Wire Rope.

Tru-Lay is furnished in every grade and construction, and gives increased service which averages between 30% and 300% over *non*-preformed wire rope of the same grade and construction. Get all the facts. Write or wire.

Write on your business letterhead for your copy of this interesting booklet. It tells, in a non-technical manner, facts about Tru-Lay Preformed Wire Rope that every wire rope buyer should know.

ACCO

AMERICAN CABLE COMPANY, *Inc.*
New York Central Bldg., 230 Park Ave., New York, N.Y.
An Associate Company of the American Chain Company, Inc.
District Offices:
Emlenton, Pa. Tulsa, Okla. San Francisco, Calif.

TRU-LAY *Preformed* WIRE ROPE
30% to 300% *Increased Service* *Depending upon the character of the service and type of equipment*

Permanent Organization For Hydro Patents Co.

(Continued from Page 28)

W. R. Carlisle, general attorney, Standard Oil Development Co.; T. G. Delbridge, technical director, Atlantic Refining Co.; R. J. Dearborn, patent attorney for The Texas Company; R. W. Hanna, vice president, Standard Oil Co. of California; F. A. Howard, president, Standard-I. G. Co. and vice president Standard Oil Development Co.; E. W. Isom, vice president, Sinclair Refining Co.; D. R. Lamont, patent attorney for the Socony-Vacuum Corp.; Walter Miller, vice president, Continental Oil Co.; J. C. Van Eck, president, Shell Union Oil Corp., and R. E. Wilson, director, Standard Oil Co. (Indiana).

At the organization meeting of the new directorate, the following officers for Hydro Patents Co. were elected: F. A. Howard, president; R. J. Dearborn, vice president; W. R. Carlisle, vice president; E. P. Resor, treasurer, and M. H. Ames, secretary.

"Since the total crude oil running capacities of the member companies is 2,329,200 bbls., which is far in excess of the minimum required under the plan," an announcement by the company said, "it became automatically operative and was put into effect by the special stockholders' meeting and election of new directors, replacing the original board of the Standard Oil Co. (New Jersey) representatives. The new directors extended until August 31 the date for final action with regard to the plan by three of the original stockholders who had not accepted prior to July 1, and instructed officers of the company to endeavor to reconcile with these three companies the differences in interpretation of the contracts which were understood to constitute the principal reasons for their failure to accept the plan within the original time limit.

"The successful completion of the Hydro Patents plan represents so far as is known the first instance in which a basic industry has created the necessary business machinery to prevent internal litigation and provide for co-operative development and control of a fundamental new process. The Hydro Patents Co. is obligated, by its agreement with Standard-I. G. Co., to follow the policy of granting licenses on a nonstockholder basis to all applicants, without discrimination, and upon uniform and reasonable terms."

Among the major refining companies that are not stockholders in the Hydro Patents Co. are Gulf Oil Corp., Tide Water-Associated Co., Sinclair Refining Co., Cities Service Cos., Union Oil Co. and Phillips Petroleum Co.

East Central Texas Wildcats

(Continued from Page 35)

Mid-Kansas Oil & Gas Co.'s No. 4 H. D. Kelly, 330 ft. from S line and 1,875 ft. from E line of lease, M. D. L. S. Coy Sur. ..... Derrick.

William A. Stone's No. 1 J. T. Perkins, 200 ft. from NW cor. of lease, Thomas Stanford Sur., 8 miles S of Ponta ..... S.D. 2,250 ft.; (corrected).

Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur. ..... S.D. 3,170 ft.

DELTA COUNTY

Commerce Oil Co.'s No. 1 Ablowich, 150 ft. from S line and 776 ft. from W line of H. D. Jewett 52-ac. tract, E. Chick Sur. ..... S.D. 3,733 ft.

Joiner et al's No. 1 Blackwell, 800 ft. S and 150 ft. from E lines of 276-ac. tract, Dunnetelle Sur. ..... Drlg. 2,940 ft.

ELLIS COUNTY

Armstrong's No. 1 Milton Cook, SE cor. of 50-ac. tract, S. Frederick Sur. ..... S.D. 215 ft.

Armstrong Bros.' Mt. 1 Reeves ..... Waiting on cmt. to set 160 ft.

Armstrong Bros.' No. 1 John Lee Winn, 1,650 ft. from E and 150 ft. from S of Orland, Orlo Wheeler Sur. ..... S.D. 1,435 ft.

Clark Brooks' No. 1 Anderson, SE cor. of 3,000-ac. tract, 10 miles SW of Wachatchie, E. C. Branch Sur. ..... Spudded and shut down.

Worthen Petroleum Co.'s No. 2 Cerf, Mulligan Farm Sur., 50 ft. W of No. 1 ..... Prepare to abandon; T.D. 2,395 ft.

FRANKLIN COUNTY

Tom Harper's No. 1 fee, 150 ft. from N line and 200 ft. from E line of 116-ac. tr., W. M. Dawson Sur. .... T.D. 3,290 ft. (corrected).

GREGG COUNTY

Arkansas Fuel Oil Co.'s No. 1 Taylor, 330 ft. from S and E lines of 52.1-ac. lease, William Robinson Sur. .. Derrick.

Atlantic Oil Producing Co.'s No. 1 P. McGeorge, 330 ft. from S line and 330 ft. from W line of lease, P. McAnally Sur. ..... Derrick.

D. M. Buffington's No. 1 Dansley, 500 ft. W and 200 ft. N of NE cor. of Searight Blackman 100-ac. lease, W. P. Chisum Sur. ..... S.D. 1,700 ft.

Burnham and Johnson's No. 1 H. L. Danaby, 650 ft. from E line of tract and 260 ft. from S line of lease, W. P. Chisum Sur. ..... Drlg. 2,950 ft.

L. C. Collins' No. 1 Cady Fisher, 330 ft. from S and W lines of 134.69-ac. lease, J. Rurrie Sur. ..... Location.

J. E. Davant's No. 1 Rowland, 180 ft. W and 450 ft. S of SW cor. of Magnolia's Roland lease, M. V. Winkle Sur. ..... Drlg. 2,570 ft.

Delta Drilling Co.'s No. 1 Hughey-Ross, 330 ft. from N line and center of E and W lines of S 10-ac. lease, John Moffitt Sur. ..... Drlg. 3,150 ft.

Dodd and Markey's No. 1 J. F. Holt, 615 ft. E and 707 ft. N of SW cor. of 200-ac. tract, H. Edwards Sur. .... S.D. 2,025 ft.

Everett and Phillips' No. 1, Block No. 18, center of block, H. R. Hokit Sur. ..... Top sand 3,633 ft.; set csg.; T.D. 3,645 ft.

Faith Oil Co.'s No. 2 Fuller, 330 ft. from N and W lines of lease, M. Alexander Sur. ..... Rig up.

Farland Oil Co.'s No. 1 Dorris, 440 ft. SE of Russell's No. 1 Duncan, M. V. Winkle Sur. ..... Location.

Feazell et al's No. 1 McKinley, 430 ft. from S line and 231 ft. from W line of lease, W. M. Robinson Sur. ... Set surface csg.

F. E. Flannery's No. 1 M. T. Cole, 330 ft. from W line and center of N and S lines of 10-ac. lease, E. M. Bramlett Sur. ..... Rig up.

Galvez Oil Co.'s No. 1 E. Strong, 280 ft. from N line and 286 ft. from E line of 50-ac. lease, J. Beaty Sur. ..... Drlg. 2,975 ft.

Lewis Gedlin's No. 1 E. L. Walker, 330 ft. N of road, 330 ft. from E line of 80.3-ac. tract, M. Dillard Sur. .. Derrick.

Guinn Petroleum Co.'s No. 1 J. S. and F. Elder, 200 ft. NE of Solar's No. 1 Elder, and 450 ft. SE of Martin's No. 1 Elder, M. V. Winkle Sur. ..... Rig up.

Gulf Production Co.'s No. 1 S. G. Andrews, 330 ft. from N and E lines of lease, W. H. Hyde Sur. ..... Drlg. 3,035 ft.

Hankamer and Cockran's No. 1 C. L. Taylor, 338 ft. from N line and 97 ft. from E line of lease, W. H. Castleberry Sur. ..... Drlg. 2,540 ft.

Humble Oil & Refining Co.'s No. 1 J. R. Smith, 330 ft. from W line and 1,070 ft. from N line of lease, D. Sanches Sur. ..... T.D. 3,698 ft.

Humble Oil & Refining Co.'s No. 1 W. C. Mackey, 348 ft. from S line and 330 ft. from W line of 198.5-ac. lease, H. F. Rogers Sur. ..... Drlg. 2,725 ft.

S. J. Jordan's No. 1 E. L. Walker, 660 ft. W of SE cor. of lease and 155 ft. from S line and 155 ft. from river, E. A. Lambert Sur. ..... Derrick.

Magnolia Petroleum Co.'s No. 1 M. Andrews, 330 ft. from N line and 368 ft. from E line of lease, J. Blair Sur. ..... Location.

Joe Mansell's No. 1 Victory, center of Blk. No. 13, H. R. Hokit Sur. ..... Derrick.

Mar Lafay Oil Co.'s No. 1 H. P. Phillips, 150 ft. from S and E lines of 30-ac. lease, H. R. Hokit Sur. ..... Rig up.

Martin Wood Oil Co.'s No. 1 Nanny E. Walker, 94 ft. from N line and 85 ft. from W line of .84-ac. lease, M. Dillard Sur. ..... Waiting on cmt. to set 925 ft.

Lee Masters' No. 1 Mrs. F. Thompson, center of Blk. No. 151, M. V. Winkle Sur. ..... Preparing to test; T.D. 3,565 ft.

McBride et al's No. 1 Tubbs, 330 ft. from N line and center of E and W lines of 6-ac. lease, D. Sanches Sur. ..... Derrick.

J. W. McCullough's No. 1 Elder, 275 ft. from S line and 185 ft. from W line of 11.64-ac. tract, M. V. Winkle Sur. ..... Rig up.

Munn et al's No. 1 L&G.N.R.R., approximately 275 ft. SW along railroad from No. 2, M. V. Winkle Sur. ... Drlg. 2,590 ft.

John Murphy's No. 1 W. P. Crews, 436 ft. from E line and center of N and S lines of 2.35-ac. lease, I. Beaty Sur. ..... Drlg. 3,080 ft.

J. B. Patty et al's No. 1 Farrell, 330 ft. S and 175 ft. W of NE cor. of E 50 acres of 148-ac. tract, D. Sanches Sur. ..... Location.

J. D. Patty et al's No. 1 J. C. McCormick, 207 ft. SE at right angles to Gladewater-Tyler road and 540 ft. SW of Abernathy and Kirkpatrick's No. 1 Greggston, M. Dillard Sur. ..... S.D. 3,617 ft.

E. A. Payne et al's No. 1 R. M. Woods, 20 ft. from S line and 31 ft. from W line of 2.13-ac. lease, H. R. Holit Sur. ..... Derrick.

J. J. Roberts' No. 1 H. S. and F. Elder, 90 ft. from SW line and 90 ft. from E line of 1-ac. lease, M. V. Winkle Sur. ..... Bldg. derrick.

Russell Petroleum Co.'s No. 1 M. T. Cole, 330 ft. from S and E lines of survey, J. A. Duncan Sur. ..... Derrick.

J. M. Simmons' No. 2 Bacle, 180 ft. from N line and 85 ft. from E line of lease, G. W. Hooper Sur. ..... Drlg. 3,050 ft.

Smith and Sikes' No. 1 King Brothers Gin Lot, SW cor. of Blk. No. 138, M. V. Winkle Sur. ..... Location.

Snowden and McSweeney's No. 1 M. Bonner, 990 ft. from E line and center of N and S lines of 100-ac. lease, J. R. McRae Sur. ..... Derrick.

Swain and Holcomb's No. 1 R. M. Wood, 1,590 ft. from N and 375 ft. E of SW cor. of survey, H. R. Hokit Sur. ..... Drlg. 2,885 ft.

Tidal Oil Co.'s No. 1 J. S. and F. Elder, 202 ft. from S line and 150 ft. from W line of lease, M. V. Winkle Sur. ..... Set surface csg.

W. C. Turnbow, trustee's No. 1 J. N. Dixon, 330 ft. from E line of lease and 477 ft. N of Alexander and Rasemussan's No. 1 Dixon, I. Beaty Sur. ..... Derrick.

W. C. Turnbow's No. 1 Knowles, W offset to Everts' No. 2 Barton, M. V. Winkle Sur. ..... Drlg. 3,125 ft.

Douglas Williams' No. 1 Taylor, 235 ft. from N line of tract and 291 ft. from E line of tract, W. H. Castleberry Sur. ..... Rig up.

Winona Oil Co.'s No. 1 Sumi-Wells, 330 ft. from S and E lines of tract, 550 ft. from S line of survey, J M. Morris Sur. ..... Drlg. 3,070 ft.

Wyche Bros.' No. 1 Charles Arnold, 330 ft. from E line and cen. of N and S lines of 34-acre lease, Peter Holmes Sur. ..... Top sand 3,709 ft.; swabbed; no show; T.D. 3,712 ft.

HENDERSON COUNTY

B. L. Green et al's No. 1 M. H. Gussett, (old well drilled deeper), 150 ft. from N line and 1,000 ft. from W line of 105.5-ac. tract, 3 miles SW of Mabank, L. D. Stover Sur. ..... Drlg. 2,930 ft.

H. H. Meyers' No. 1 M. E. Olson, 2 miles S of Brownsboro tract in NW cor. of survey, George Wilson Sur. ..... Waiting on cmt. to set 102 ft.

HILL COUNTY

Sherman-Houseman's No. 1 J. F. Griffith, in Samuel Waddell Sur. ..... Fishing 3,256 ft.

T. J. Spikes' No. 1 M. H. Davis, 150 ft. from S and E lines of 55-ac. tract, H. R. Alexander Sur. ..... Location.

HOPKINS COUNTY

Roark et al's No. 1 Taylor, 220 ft. from N and W lines of 80-acr. tract in the John Polk Sur. ..... S.D. 540 ft.

HOUSTON COUNTY

Nelson's No. 1 Harron, 300 ft. out of NE cor. of 327-ac. tract, J. P. Procella Sur. ..... Spudded and S.D. 37 ft.

T. E. Roberts' No. 1 Pennington, 750 varas W of E line and 500 varas from S line of survey on 186-ac. tract, Ramond LaGarza Sur. ..... T.D. 2,660-66 ft.

HUNT COUNTY

Chandler et al's No. 1 Mrs. A. Walker, 200 ft. from S line and 500 ft. from W line of most southerly SW cor. of tract and survey, J. P. Bowerman Sur. .... Derrick.

KAUFMAN COUNTY

Standy Darnell et al's No. 1 Sally Pannill ..... S.D. 2,350 ft.

LAMAR COUNTY

G. W. Davy et al's No. 1 McGustion, 450 ft. from S line, 450 ft. from W line of farm and survey, Galet Wood Sur. ..... Temp. abnd. 3,605 ft.

Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. ..... S.D. 2,446 ft.

Doyle and Jondeau's No. 1 Horn, 226 ft. from S line and 608 ft. from E line of lease, R. P. Mayor Sur. ..... S.D. 3,030 ft.

LEON COUNTY

Alladay et al's No. 1 W. R. Thompson, 330 ft. from N line of survey and 330 ft. from E line of 98-ac. tract, N. M. Allen Sur. ..... Derrick.

MORRIS COUNTY

Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 65.5-ac. tract, J. D. Nelson Sur. ..... S.D. 3,554 ft.

NACOGDOCHES COUNTY

Adams et al's No. 1 Fuller Brothers, located in a 269-ac. tract, Jose Flores Sur. ..... Location.

POLK COUNTY

Taylor et al's No. 1 E. L. Duke, 330 ft. from N and W lines of 23.5-ac. tract, SW cor. of county, Peter J. Manard Sur. ..... Rig up.

RAINS COUNTY

C. H. Bayliss' No. 1 Ownby, 150 ft. N and 1,100 ft. from E of most easterly SE cor. of survey, Alexander Sur. ..... Drlg. 4,500 ft.

RED RIVER COUNTY

Hoffman and Henson's No. 1 H. H. Lennox, 2,790 ft. W and 200 ft. S of most easterly NE cor. of survey, J. E. Edmondson Sur. ..... S.D. 60 ft.

Concord Oil Co.'s No. 1 J. R. Dellahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. ..... Rigging up heavy rig to drill to 4,000 ft.

L. G. Priest's No. 1 W. C. Ware, 3½ miles SE of English, 927 ft. from most southerly S line and 150 ft. from most easterly E line of 103.2-ac. tract, James Burkham Sur. ..... S.D. 350 ft.

ROCKWALL COUNTY

Buccaneer Oil Co.'s No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Set 10-in. csg. 120 ft.

RUSK COUNTY

Arrow Drilling Co.'s No. 1 Church Lot, center of M. E. Church Lot of London F. Cordova Sur. ..... Rig up.

Brooks Petroleum Co.'s No. 1 Mayfield, Daniel Clark Sur. ..... Top sand 3,632 ft.; waiting on standard rig; would not flow; T.D. 3,702 ft.

D. D. Bruton's No. 1 R. A. Motley, center of 5-ac. lease, F. Cordova Sur. ..... Drlg. 1,150 ft.
T. E. Castle's No. 1 R. H. Gary estate, 3,960 ft. from N line and 5,280 ft. from W line of survey, 10 miles S of Henderson, A. Latham Sur. ..... Drlg. 2,810 ft.
A. B. Edwards et al's No. 1 E. L. Pinkston, center of 63-ac. tract, M. J. Pru Sur. ..... Derrick.
J. Guinn's No. 1 Neal Cooper, center of Blk. No. 34, T. J. Moore Sur. ..... Waiting on standard rig; T.D. 3,660 ft.
Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. ..... Derrick.
Hasting and Dodson's No. 1 E. B. Alford, center of Blk. No. 37, T. J. Moore Sur. ..... Derrick.
Hathaway et al's No. 1 Gray, J. M. McLain Sur. ..... S.D. 3,519 ft.
Helden-Rodgerson et al's No. 1 Barton and Birdwell, N offset to Reisinger et al's No. 1 Barton, W. G. Tutt Sur. ..... Washing in; T.D. 3,792 ft.
Hendershot et al's No. 1 Green Washington, 330 ft. from N line and 250 ft. from W line of 11.75-ac. tract, D. Clark Sur. ..... S.D. 2,400 ft.
H. H. Howells' No. 1 Gus Johnson, 330 ft. from S line and 330 ft. from W line of 31.84-ac. lease H. B. Dance Sur. ..... Drlg. 3,760 ft.
Humble Oil & Refining Co.'s No. 1 Oscar Robertson, 350 ft. from N line and 134 ft. from W line of 50-ac. lease, J. D. Clarke Sur. ..... Derrick.
T. A. Johnson's No. 1 H. B. Leverett, 200 ft. from N line and 222 ft. from W line of tract, J Lindley Sur. ..... Drlg. 3,100 ft.
W. C. Know's No. 1 W. D. Peterson, center of 3.75-ac. tract, Jacob Lewis Sur. ..... S.D. 2,200 ft.; rig moved off
C. H. Lyons' No. 1 Deason, 150 ft. from S line and 150 ft. from W line of 33-ac. lease, M. J. Pru Sur. ..... Running tubing 3,793 ft.
Marr Drilling Co.'s No. 1 John Retting, 330 ft. from N line and 1,650 ft. from E line of tract, J. H. Sparks Sur. ..... Rig up.
Mid-Kansas Oil & Gas Co.'s No. 1 Peter Tipps, 330 ft. from N and W lines of lease, Peter Tipps Sur. ..... Location.
Mid-Kansas Oil & Gas Co.'s No. 2 T. O. Warren, 330 ft. from S line and 583 ft. from E line of lease, J. B. De Cadena Sur. ..... Derrick.
Mid-Kansas Oil & Gas Co.'s No. 1 M. A. Price, 210 ft. from N line of road and 330 ft. from W line of lease, J. B. De Cadena Sur. ..... Derrick.
Pierce and Moore's No. 1 Terrell, E offset to Sun's No. 2 Barker, E. G. Sevier Sur. ..... Rig up.
Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. ..... T.D. 3,323 ft.
Snider and Spradner's No. 1 Brightwell, 650 ft. from S line and 150 ft. from W line of lease, R. W. Smith Sur. ..... Rig up.
Sun Oil Co.'s No. 1 Jeff Hendon, 1,193 ft. from N line and 330 ft. from W line of lease, Juan Ximines Sur. ..... Waiting on cmt. to set 3,605 ft.
R. H. Vice's No. 1 Neal Cooper, 315 ft. SW along NW line of Cooper tract and 141 ft. SE at right angles, T. J. Moore Sur. ..... Waiting on standard rig 3,797 ft.
Watson and Butler's No. 1 G. W. Tipps, 330 ft. from S line and 600 ft. from W line of 18-ac. lease, H. M. Smith Sur. ..... S.D. 250 ft.
Wells and Gann's No. 1 T. H. Gill, 330 ft. from N and E lines of lease, R. W. Smith Sur. ..... Bldg. derrick.
Paulett et al's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. ..... S.D. 1,465 ft.

SMITH COUNTY

Cockburn and Hooper's No. 1 Lula Jackson, 330 ft. from E line and center of N and S lines of 27.8-ac. tract, E. Daniels Sur. ..... Rig up.
Golden Eagle Oil Co.'s No. 1 T. B. Collier, 137 ft. from S line and 150 ft. from E line of lease, J. Jordan Sur. ..... Derrick.
Hooper et al's No. 1 Lula Jackson, 330 ft. S and 330 ft. E of most northerly SW cor. of Monroe Shell Robinson lease, E. Daniels Sur. ..... Fishing for drill stem, T.D. 2,934 ft.
McRabie et al's No. 1 C. P. Hamilton, 330 ft. from S and E lines of 255-ac. tract, Jackson Rector Sur. .... Location.
Joiner et al's No. 1 C. S. Jackson ..... S.D.; swabbed dry; T.D. 4,045 ft.
Rabe et al's No. 1 Bateman, 332 ft. from S line and 278 ft. from E line of 15-ac. lease, James Jordan Sur. ..... Derrick.
F. L. Shackelford's No. 1 Lula Jackson, 384 ft. E along N line of Summitt Mayfield lease, from NW cor. and 357 ft. N at right angles, E. Daniels Sur. ..... Rig up and S.D.
Smith-Guerin and King's No. 2 S. S. Cooke, 180 ft. from N line of Blk. No. 8 and 580 ft. E of No. 1, Juan Vargas Sur. ..... Drlg. 2,950 ft.
Alph Tillman et al's No. 1 Jessie Cole, 137 ft. from E line and 375 ft. from N line of 32-ac. lease, center of 5-ac. lease, James Jordan Sur. ..... Coring 3,729 ft.

TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..... T.D. 4,212 ft.

UPSHUR COUNTY

Cranfill & Reynolds' No. 1 Laney Graves, 330 ft. from S and E lines of lease, M. Irwin Sur. ..... Derrick.
Cranfill & Reynolds' No. 3 Williams, 330 ft. from S line and center of E and W lines of lease, McKinley and Williams Sur. ..... Waiting on cmt. to set 3,622 ft.
Grover Hart's No. 1 Allen, 330 ft. from S and E lines of lease, one-half mile W of Mountain, Gonzales Sur. ..... Derrick.
Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 272-ac. lease, 3 miles E and 1¼ miles N of Cranfill & Reynolds' No. 1 Rash, John Denson Sur. ..... Waiting orders 3,710 ft.
Lester and Duffield's No. 1 L. Graves, 169 ft. N and 330 ft. W of SW cor. of J. McRae Sur., M. Irwin Sur. ..... Derrick.
Pitts et al's No. 1 H. Davis, center of 7.5-ac. lease, W. R. Stephens Sur. ..... Derrick.
Henry Sikes' No. 1 J. P. Lynch, 193 ft. SE of Salome-Cooper's No. 6 O'Bryan and 175 ft. NE of No. 5, J. Pineda Sur. ..... Rig up.
H. K. Spear's No. 1 D. Bruner, 700 ft. W and center of N and S lines of 5-ac. lease, M. Chandler Sur. .... Rig up.
Steen Drilling Co.'s No. 3 Loden, 330 ft. from E line and center of N and S lines of 27.2-ac. lease, G. W. Hooper Sur. ..... Waiting on cmt. to set 3,681 ft.
The Texas Company's No. 1 J. Williams, 330 ft. from N and E lines of 93.34-ac. lease, Jackson Crouch Sur. ..... Derrick.
Turnbow's No. 1 D. C. Shelton, center of 2½-ac. tract, Wm. King Sur. ..... Derrick.
Watson's (formerly Kinsey) No. 1 D. F. Smith, 466 ft. from S line and 1,165 ft. from E line of 266-ac. tract, J. R. Davis Sur. ..... Drlg. 747 ft.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 235-ac. tract, 2½ miles S of Canton. M. J. DeCadena Sur. ..... S.D. 2,405 ft.
Humble Oil & Ref. Co.'s No. 3 L. V. Freeman, 250 ft. N and E of SW cor. of lease, John Walling Sur. .... Location.
Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... S.D. 2,300 ft.
Pure Oil Co.'s No. 5 A. W. Ellison, 710 ft. S of N line and 700 ft. W of E lines of lease, James Rose Sur. ..... Drlg. 2,700 ft.
Pure Oil Co.'s No. 3 Mrs. C. White, 250 ft. S and 250 ft. W of NE cor. of lease, John Walling Sur. ..... Cmt. setting 2,963 ft.
Pure Oil Co.'s No. 1 A. E. Ellison, 150 ft. S and E of NW cor. of lease, John Walling Sur. ..... Location.
A. C. Rowan's No. 1 W. E. Price, 150 ft. from N line and 150 ft. from W line of 28-ac. tract, John Walling Sur. ..... Location.
Van Oil Association's No 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ..... T.D. 2,850 ft.

WOOD COUNTY

De Canther's No. 1 N. L. McLain, 350 ft. from N line and 642 ft. from E line of tract, Sam Brooks Sur.... Drlg. 1,600 ft.
W. B. Saulsbury's No. 1 T. H. Peters, 600 ft. from S line and 200 ft. from E line of 320-ac. tract and survey, 4 miles E of Mineola, W. B. McNutt Sur. .... Bldg. derrick.
Talko Oil Co.'s No. 1 G. T. Ross, R. L. Smith Sur. ..... T.D. 3,500 ft.
Wood County Dev. Co.'s No. 1 Davis, approximately 180 ft. from S line of 160-ac. tract and 2¼ miles S of Kantes in Sarah McDonald Sur. ..... T.D. 2,070 ft.

Wildcat Operations in West Texas

(Continued from Page 36)

Amerada Pet. Corp.'s No. 4 Coffee, 1,300 ft. from N and 1,650 ft. from W, Sec. 22, Blk. 33, Twp. 2s, T.&P. Sur. ..... Drlg. 2,260 ft.
Amerada Pet. Corp.'s No. 5 Coffee, 2,310 ft. from N and 1,650 ft. from W, Sec. 22, Blk. 33 ..... Drlg. 1,375 ft.
Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur.. Spudded and S.D.
Merrick & Lamb's No. 4 Chalk, 1,650 ft. from N and 990 ft. from W, Sec. 125, Blk. 29, W.&N.W. Sur. ..... S.D. 975 ft.
Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. .... S.D. 1,030 ft.
Sinclair-Prairie Oil Co.'s No. 2 Dodge, 2,313 ft. from S and 306 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P. Sur. ..... T.D. 2,794 ft.; pumping.
Sinclair-Prairie Oil Co.'s No. 3 Dodge, 1,650 ft. from S and 429 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P... Drlg. 472 ft.

IRION COUNTY

Davis et al's No. 1 Sugg, 1,560 ft. from S and 925 ft. from W, Sec. 3,081, Blk. 28, H.&T.C. Sur. ..... S.D. 7,543 ft.; drlg. by tools.
Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ..... S.D. 7,420 ft.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 43.4-acre tract in G. Martines Sur. ..... S.D. 1,005 ft.; tamp. abnd.
Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. ..... Spudded and S.D.
J. M. Johnson's No. 1 Swann, 6,150 ft. from S and 1,550 ft. from E, I. Miley Sur. ..... Drlg. 2,385 ft.
Robert Oil Co.'s No. 1 Swann, 2,350 ft. from W and 2,920 ft. from S, I. Miley Sur. ..... S.D. 2,495 ft.
Smart & Reynolds' No. 1 Reynolds, 2,500 ft. from N and 150 ft. from W, Sec. 2, W. T. Scott Sur. No. 3. S.D. 175 ft.
Southern Oil Co.'s No. 1 Sears, 300 ft. from S and W J. H. Grayson Sur. ..... Drlg. 2,156 ft.
C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 ..... S.D. 1,751 ft.
Transcontinental Prod. Co.'s No. 1 Rust, 5,800 ft. N and 495 ft. W of SE cor. J. J. Hughes Sur. 556 ..... Spudded.
Ungren & Frazier's No. 2 King, 465 ft. from N, 150 ft. from E, Subd. 6, M. Bueno Sur. ..... Rigging up.
Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 8, O.A.L. Sur. ..... Location.

LOVING COUNTY

Ervin & Mahres' No. 1 Thrope, 2,310 ft. from E and 330 ft. from S. Sec. 46, Blk. 53, T.&P. Sur. ..... S.D. 810 ft.
Fair Lawn Syndicate's No. 1 Brookfield, 330 ft. from N and W, Sec. 30, Blk. 29, P.S.L. ..... Drlg. 3,370 ft.
Goldman et al's No. 1 Allen, 330 ft. from NE and NW of Sec. 90, Blk. 1, W.&N.W. Sur. ..... Drlg. 1,850 ft.
Goldman et al's No. 2 Allen, 330 ft. from NW, 2,310 ft. from SW, Sec. 90, Blk. 1, W.&N.W. Sur. ..... Location.
Goldman et al's No. 1 Reagan-McElvain, 330 ft. from NE, 2,310 ft. from NW, Sec. 84, Blk. 1, W.&N.W. Sur.. Location.
Lewis & Slagel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur.. S.D. 2,280 ft.
Martin et al's No. 1 Wheat, 990 ft. from SW and SE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... Rig.
Miller et al's No. 1 Ferguson, 990 ft. from NE of Sec. 44, Blk. 29 ..... Spudded and S.D.
Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... T.D. 3,660 ft; straightreaming csg. at 3,000 ft.
Trinity Drlg. Co.'s No. 1 Wheat, 2,310 ft. from SW, 330 ft. from SE, Sec. 3, Blk. 2, W.&N.W. Sur. ..... S.D. 1,300 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... S.D. 2,860 ft.

PECOS COUNTY

Adams et al's No. 1 Shearer, 1,650 ft. from SE and 330 ft. from NE Sec. 101, Blk. 10, H.&G.N. Sur. .....
Aero Gas & Royalty Co.'s No. 2 Byrne, 1,470 ft. from NW and 1,500 ft. from SW, Sec. 54, Blk. 10, H.&G.W. Sur. ..... Drlg. 250 ft.
Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ..... Drlg. 1,005 ft.
Hampton et al's No. 1 Byrne, 1,980 ft. from NW and 1,500 ft. from NE, Sec. 54, Blk. 10, H.&G.N Sur. ..... Location.
Messinger et al's No. 1 Jones, 1,200 ft. from NW, 1,290 ft. from SW, Sec. 5, Blk. 9, H.&G.N. Sur. ..... S.D. 1,395 ft.; T.P. 1,356 ft.
New State Oil Co.'s No. 1 Tippett, 1,349 ft. from S and 330 ft. from E. Sec. 40, Blk. 194, G.C.&S.F. Sur. ..... Location.
Steed Prod. Co.'s No. 1 Monroe, 150 ft. E, 300 ft. N of SW cor. of lease, Sec. 39, Blk. 194, G.C.&S.F. Sur..... S.D. 1,345 ft.; to run 7-in. csg.
S.D. 515 ft.; T.P. 462 ft.

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 3,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ..... S.D. 328 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 6-C University, 1,370 ft. fro mS and 1,600 ft. from E. Sec. 12, Blk. 2 ..... T.D. 8,836 ft; to test
Big Lake Oil Co.'s No. 7-C University, 1,570 ft. from W and 725 ft. from S, Sec. 25, Blk. 9 ..... Drlg 6,705 ft.
Group Oil Corp.'s No. 5-B University, 2,700 ft. from S and 1,775 ft. from W, Sec. 34, Blk. 9 ..... Drlg. 5,260 ft.

REEVES COUNTY

F. McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur. ... Drlg. 1,855 ft.
Southern Star Oil Co.'s No. 1 Wright, 1,320 ft. from S and W, Sec. 58, Cassel's Sur. ..... S.D. 250 ft.

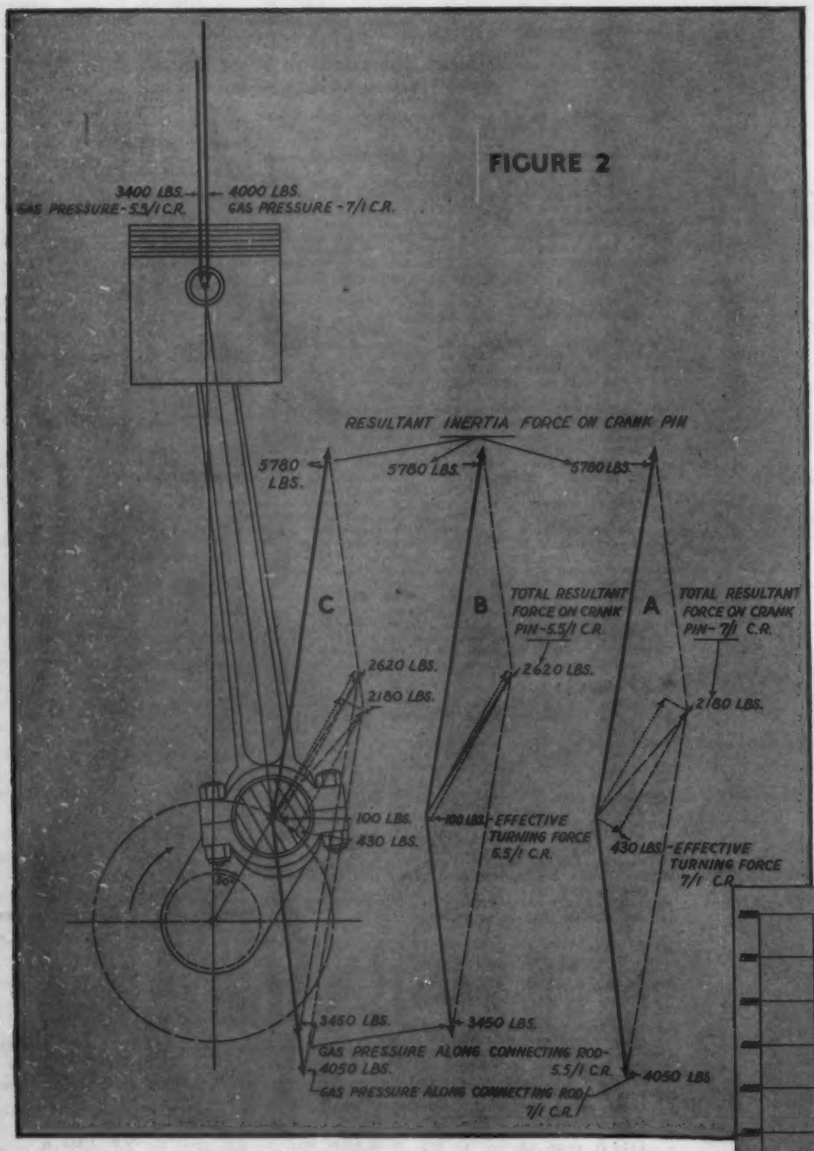
RUNNELS COUNTY

Blue Bonnett Oil Co.'s No. 1 McMillan, 1,368 ft. from N and 660 ft. from W, Sec. 22, N. Travis Sur. ..... T.D. 2,522 ft.; T.P. 2,520 ft.; flowing better than 100 bbls. day.
Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 519 ..... S.O. 3,417-20 ft.; S.D. 3,660 ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... T.D. 5,410 ft.; fishing.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... S.D. 5,580 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N. 1,570 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,053 ft.

How High Compression



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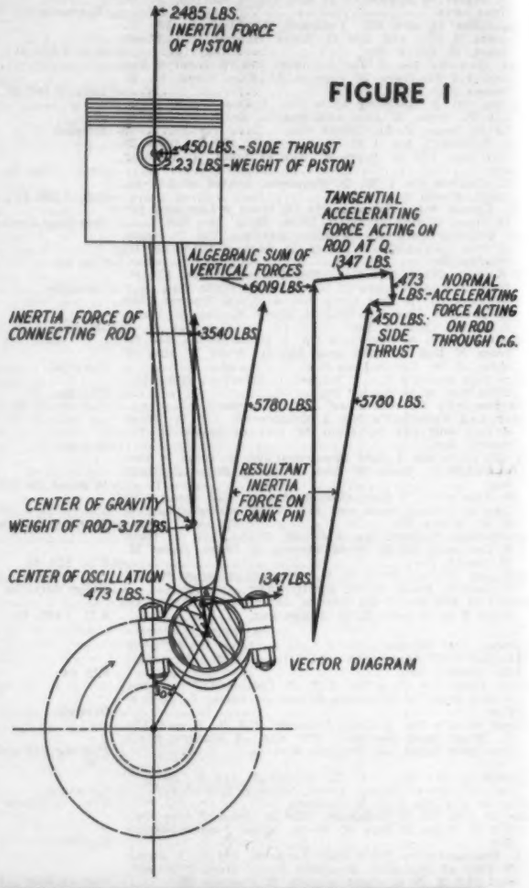


FIGURE 1
2485 LBS. INERTIA FORCE OF PISTON
450 LBS. - SIDE THRUST
2.23 LBS - WEIGHT OF PISTON
TANGENTIAL ACCELERATING FORCE ACTING ON ROD AT Q. 1347 LBS.
ALGEBRAIC SUM OF VERTICAL FORCES 6019 LBS.
473 LBS. NORMAL ACCELERATING FORCE ACTING ON ROD THROUGH C.G.
INERTIA FORCE OF CONNECTING ROD 3540 LBS.
450 LBS. SIDE THRUST
5780 LBS.
5780 LBS.
RESULTANT INERTIA FORCE ON CRANK PIN
CENTER OF GRAVITY
WEIGHT OF ROD - 3.17 LBS.
CENTER OF OSCILLATION
473 LBS.
1347 LBS.
VECTOR DIAGRAM

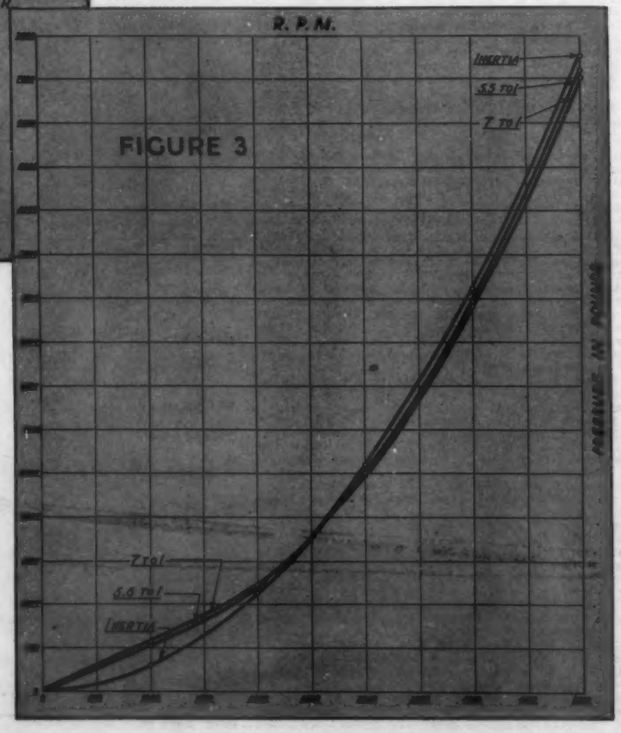


FIGURE 1 (*Upper right*)—*WITHOUT GAS PRESSURES—Vector analysis of instantaneous forces acting on connecting rod and crank-pin at assumed speed and position.*

FIGURE 2 (*Directly above*)—*WITH GAS PRESSURES—Vector analysis of instantaneous resultant inertia force and gas pressure acting on the crank-pin for* (A) *7.0 to 1 compression ratio and* (B) *5.5 to 1 compression ratio.* (C) *shows vector diagrams* A *and* B *superimposed on crank-pin.*

FIGURE 3 (*At right*)—*Mean crank-pin pressures at various engine speeds for 5.5 to 1 and 7.0 to 1 compression ratios. Also curve of mean pressures which would be caused by inertia alone.*

lowers extreme *Bearing Pressures*

THE increased gas pressures that result from higher compression ratios actually *decrease* extreme crank-pin bearing loads.

The reason for this is that gas pressures are *opposed to* and *less than* the enormous inertia forces of high speed operation which are the real causes of extreme crank-pin bearing loads. Gas pressures therefore reduce the mean load on bearings at those speeds which produce greatest strain.

The fact that the higher gas pressures produced by higher compression *decrease* the mean average force acting on the crank-pin at high speed and yet *increase* the turning moment is due to their effect in changing the direction of the effective force at the same time, so that it is more nearly perpendicular to the crank. A simple vector analysis given on the opposite page explains this seeming paradox.

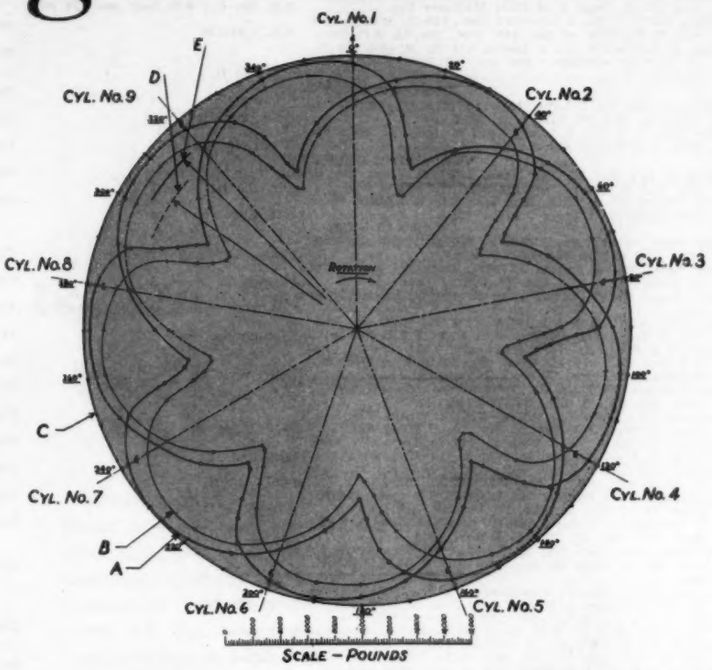


FIGURE 4—*Crank-pin bearing pressures of a nine cylinder radial aircraft engine during one complete cycle at a speed of 1900 r.p.m. with* (A) *compression ratio at 5.5 to 1 and* (B) *with compression ratio at 7.0 to 1.* (C) *represents the inertia force due to rotating and reciprocating weight.* (D) *shows mean force for combined inertia forces and gas forces for 7.0 to 1 compression ratio.* (E) *shows same for 5.5 to 1 compression ratio.*

Figure 1 shows a piston, connecting rod and crank of an eight-cylinder automobile engine, now in production, at 30 degrees past top dead center. If the engine were turned at a speed of 4000 r.p.m. with no gas pressure exerted on the piston, the connecting rod would exert a force of 5780 pounds on the crank-pin at this position in the cycle. The vector diagram, by means of which the inertia force on the crank-pin was determined, is also shown in Fig. 1.

Figure 2 shows the piston, connecting rod and crank at 30 degrees past top dead center as before with gas pressure forces of 3400 pounds and 4000 pounds, corresponding to compression ratios of 5.5 to 1 and 7.0 to 1 respectively, acting downward on the top of the piston. These gas pressure forces, transmitted through the connecting rod, add vectorially to the combined inertia and gravity force of Fig. 1, resulting in single forces on the crank-pin of 2620 pounds and 2180 pounds at 5.5 to 1 and 7.0 to 1 compression ratio respectively. The vector diagrams by which these forces were determined are also shown in Fig. 2.

Division of the single resultant crank-pin forces on the vector diagrams into their respective tangential and radial components shows that the effective turning forces at this crank position are 100 pounds at 5.5 to 1 compression ratio and 430 pounds at 7.0 to 1 compression ratio.

Figure 3 shows curves of mean crank-pin pressures at various engine speeds for the two compression ratios, together with a curve of mean pressures which would be caused by inertia alone. At low engine speeds, where the crank-pin bearing loads are too small to be of importance, the combined gas pressure and inertia loads are greater than the inertia alone and are slightly increased by the increase in compression. At speeds above 2500 r.p.m., however, the inertia forces begin to increase rapidly toward high values, and becomes greater than the opposing gas pressure forces. And therefor, at the higher speed, any increase in compression causes a decrease in the total mean pressure on the crank-pin bearings.

Figure 4 demonstrates this point even more clearly by means of a polar diagram showing magnitude of resultant force on the crank-pin of a radial airplane engine.

The decrease in *pv* values for bearings at high engine speeds is ONE of the advantages to be obtained by increasing compression ratio. Such a change in engine design also results in: TWO—Increased power, which produces faster acceleration, higher top speed, and generally improved performance, THREE—Less heat to cooling water, FOUR—Less heat to exhaust, FIVE—Greater fuel efficiency. Higher compression does NOT result in increased engine weight. It does NOT result in increased engine cost.

We shall be glad to help you on any of your problems where our experience with engines of higher compression ratios may prove valuable to you. Ethyl Gasoline Corporation, Chrysler Building, New York City.

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, E.&T.C. Sub. ..... S.D. 5,100 ft.
W. S. Guthrie's No. 1 Snyder National Bank, 330 ft. from N and 2,310 ft. from E of Sec. 115, Blk. 97, H.&T.C. Sur. ..... Drlg. 1,745 ft.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 63, Blk. 3, H.&G.N. Sur. ..... Spudded and S.D.
Seifert & Dibbie's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... S.D. 4,992 ft.

TAYLOR COUNTY

Dunigan et al's No. 2 Hunter, 2,387 ft. from N and 3,567 ft. from E of Sec. 27, W. R. Wills Sur. No. 122. Skidded rig 40 ft. west; S.D. 915 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.-K.-T. Sur. ..... S.D. 2,269 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... S.D. 3,150 ft.; moved off tools
Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ..... S.D. 120 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F. Sur. S.D. 6,120 ft.
Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... S.D. 2,545 ft.
Sides et al's No. 1 Phelps, 2,167 ft. from N and 2,482 ft. from W, Sec. 5, G. W. Hurley Sur. ..... Fsg. 2,440 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Korsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... S.D. 760 ft.; S.O. and gas 735 ft
Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur... S.D. 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... S.D. 200 ft.

UPTON COUNTY

Farley et al's No. 3 Lane, 1,650 ft. from S and 330 ft. from W, Sec. 36, Blk. 1, M.-K.-T. Sur. ..... Drlg. 2,275 ft.
Hope Pet. Co.'s No. 2 Lane, 2,310 ft. from N, Sec. 36, Blk. 1, M.K.&T. Sur. ..... Drlg. 610 ft.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1, I.&G.N. Sur. ... S.D. 400 ft.
O. O. Owens' No. 1 Millis, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 3,130 ft. ..... S.D. 6,780 ft.

WARD COUNTY

Abell Bros. et al's No. 1 Smith, 330 ft. from NE and NW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Fishing 2,265 ft.
Abell Bros.' No. 2 Smith, 2,310 ft. from SE and 2,620 ft. from NE, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,090 ft.
Abell Bros.' No. 3 Smith, 2,310 ft. from NE and NW, Sec. 4 ..... T.P. 2,351 ft.; cleaning out 2,412 ft.
Barnsdall Oil Co.'s No. 2 Henry, 990 ft. from SE and 330 ft. from NE, Sec. 28, Blk. B-29, P.S.L. Sur. ... Rigging up.
Bradford & Bentley's No. 1 B. Carson, 1,650 ft. from the NE line and 990 ft. from the SE line of Sec. 26, H.&T.C. Sur., Blk. ? ..... Drlg. 2,235 ft.
Caprito et al's No. 1 Beatty, 330 ft. from SW and 990 ft. from SE, Sec. 3, Blk. 34, H.&T.C. Sur. ..... Drlg. 675 ft.
Eastland Oil Co.'s No. 1 Green, 2,304 ft. from NW and 2,310 ft. from SW Sec. 4, Blk. 34, H.&T.C. Sur. ... Drlg. 2,185 ft.
Eastland Oil Co.'s No. 2 Weiss, 1,728 ft. from SW and 2,265 ft. from SE, Sec. 4, Blk. 34, E.&T.C. Sur. ... Location.
Eastland Oil Co.'s No. 1-A Weiss, 2,304 ft. from SE, 332 ft. from SW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 663 ft.
Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft.
H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ..... S.D. 2,323 ft.
Gulf Production Co.'s No. 22 O'Brien, 1,100 ft. from N and 330 ft. from E, Sec. 16, Blk. F, G.M.M.B.&A. Sur. ..... Drlg. 1,808 ft.
Gulf Prod. Co.'s No. 12 Hutchings, 330 ft. from N, 990 ft. from W, Sec. 8, Blk. F ..... Drlg. 825 ft.
Kregle et al's No. 1 Heasler, 3,062 ft. from SE, 330 ft. from NE, Sec. 46, Blk. 34, H.&T.C. Sur. ..... Location.
Landreth Prod. Co.'s No. 1 Barker, 330 ft. from NW, 437 ft. from NE, Sec. 27, Blk. B-29, P.S.L. Sur. ... Location.
Massie et al's No. 1 Stewart, 330 ft. from SW and SE, Sec. 13, Blk. 14, H.&T.C. Cur. ..... S.D. 2,468 ft.; shot and flowign.
R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,522 ft. from SW, Sec. 1, J. Howe Sur. ..... Drlg. 2,010 ft.
Penn Oil Co.'s No. 1 York, 2,310 ft. from NW and SW Sec. 10, Blk. 34, H.&T.C. Sur. ..... Drlg. 1,590 ft.
Plains Prod. Co.' and Simms Oil Co.'s No. 1 Benton Land Co., 440 ft. from the SE and 440 ft. from SW lines of Sec. 26, W.&N.W.R.R. Sur., Blk. 1 ..... Drlg. 4,187 ft.
Rector Oil Co.'s No. 1 Monroe, 660 ft. from NE and SE, Sec. 62, Blk. 33, H.&T.C. Sur. ..... Spudding.
Renaud-Prettyman's No. 1 University, 330 ft. from N and E Sec. 4, Blk. 16 ..... Drlg. 2,425 ft.
Rixford-Fuglarr's No. 1 London, 660 ft. NW, 330 ft. NE E cor. Sec. 16, Blk. 32, H.&T.C. Sur., but in Sec. 8 ..... Location.
T. P. Coal & Oil Co.'s No. 4 James, 330 ft. from NE and 2,305 ft. from SE, Sec. 5, Blk. 34, H.&T.C. Sur. ... Drlg. 1,000 ft.
Thomas et al's No. 1 Bennett, 2,310 ft. from NE and SE, Sec. 16, Blk. 34, E.&T.C. Sur. ..... T.D. 1,435 ft.; underreamed 8¼-in. csg. at 1,400 ft.
White et al's No. 1 Burtner, 150 ft. from NE and 515 ft. from SE of Sec. 8, Blk. 32, H.&T.C. Sur. ..... S.D. 755 ft.

WINKLER COUNTY

Sid Richardson et al's No. 1 Scarborough, 1,650 ft. from N and W, Sec. 1, Blk. 77, P.S.L. Sur. ..... Rigging up machine.
Sid Richardson et al's No. 2 Sealy estate, 1,650 ft. from S and 330 ft. from W, Sec. 94, Blk. A, G.M.M.B.&A. Sur. ..... Rigging up machine.

Wildcat Operations in Texas Panhandle

Week Ending August 1

CARSON COUNTY

Company, well, farm name, section and block—	Remarks:
H. A. M. Oil Co.'s No. 2 Cooper, 330 ft. from S and E, Sec. 5, Blk. 9, I.&G.N. Sur.	Spudded.
Osborne's No. 1 Byrum, 330 ft. from N and E, N½ NW, Sec. 188, Blk. 3, L&G.N. Sur.	Drlg. 960 ft.
Skelly Oil Co.'s No. 11 East Schaffer, 440 ft. from N, 2,640 ft. from E. Sec. 139, Blk. 3, I.&G.N. Sur.	Drlg. 2,725 ft.
Stubblefield-Shell's No. 3 Cooper, 330 ft. from N and 330 ft. from E of SE, Sec. 5, Blk. 9, I.&G.N. Sur.	Cellar.
Texoma Nat. Gas Co.'s No. 1-T, 2,640 ft from N line, 783 ft. from W line, Sec. 21, Blk. ?, I.&G.N. Sur.	Drlg. 1,375 ft.

COLLINGSWORTH COUNTY

Downey et al's No. 1 Beasley, SE cor. SW SE, Sec. 95, Blk. 15, H.&G.N. Sur.	Rigged up.
Kates et al's No. 1 Hickman, center NE, Sec. 43, Blk. 10, H.&G.N. Sur.	Spud.

COTTLE COUNTY

Darby Pet. Co. et al's No. 1 Purcell, 330 ft. from N, 1,320 ft. from E, Sec. 46, Blk. B, John H. Stevens Sur.	Drlg. 1,475 ft.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 15-1n-1e	T.D. 925 ft; U.R. 12½-in. csg.

GRAY COUNTY

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur.	S.D. 2,428 ft.
Bell O. & G. Co.'s No. 1 Tedesco-Webb, 330 ft. from S and E, Sec. 61, Blk. 25, H.&G.N. Sur.	Drlg. 1,250 ft.
Boyes et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur.	S.D. 1,650 ft.
Danciger O. & R. Co.'s No. 2 Williams, 150 ft. from N, 1,650 ft. from W S half NW, Sec. 7, Blk. 1, A.C.H.& B. Sur.	T.D. 2,584 ft.; ran 8-in. csg.
Dixon Creek Oil Co.'s No. 1 Chapman, 330 ft. from S and W, Sec. 69, Blk. 25, H.&G.N. Sur.	Building rig.
Graham-Crue Hoover's No. 1 Barrett, 330 ft. from S and W, Sec. 130, Blk. 3, I.&G.N. Sur.	Rig on ground.
Granite Prod. Co.'s No. 1 Chapman, 275 ft. from N line, 110 ft. from W line, S½ SW, Sec. of Blk. 26, H. &G.N. Sur.	T.D. 2,900 ft.; plugged back to 2,343 ft.
Gulf Prod. Co.'s No. 7 Saunders, 330 ft. from N and W, SW, Sec. 40, Blk. 3, I.&G.N. Sur.	Drlg. 1,775 ft.
Jewel Oil Co.'s No. 1 Meers, 330 ft. from S and W. NW SW, Sec. 106, Blk. 3, I.&G.N. Sur.	Fishing 3,483 ft.
Kewanee O. & G. Co.'s No. 1-C Adams, 330 ft. from S and E, Sec. 3, Blk. 26, H.&G.N. Sur.	T.D. 365 ft.; ran 10-in. csg.
Kewanee O. & G. Co.'s No. 1-F Morse, 330 ft. from S and W, Sec. 3, Blk. 26	Cellar.
Mazda-Shell's No. 2 Worley Reynolds, 660 ft. from S and E of NE, Sec. 35, Blk. 3, I.&G.N. Sur.	T.D. 2,987 ft.; testing; T.P. 2,970 ft.; flowing 70 bbls. per hour.
Nipper et al's No. 1 Morse, 330 ft. from N and E, Sec. 1, Blk. 26, I.&G.N. Sur.	Fishing 2,635 ft.
Nabob Oil Co.'s No. 1-E Morse, 330 ft. from S and W, W½ SE, Sec. 67, Blk. 25, H.&G.N. Sur.	T.D. 2,623 ft.; 500 ft. oil in hole; parted pipe.
Parton & Holt's No. 2 Morse, 330 ft. from W, 250 ft. from N. W½ SW, Sec. 5, Blk. 26, H.&G.N. Sur.	Set 6-in. csg. 2,405 ft.
Parton Holt's No. 3 Morse, 660 ft. from N and E of E half SW, Sec. 5, Blk. 26, H.&G.N. Sur.	Drlg. 880 ft.
Pulse-Shell Pet. Corp.'s No. 1 Culler, 330 ft. from S and E, Sec. 173, Blk. 3, I.&G.N. Sur.	Drlg. 3,150 ft.
Pulse-Shell's No. 1 Brown, 290 ft. from N, 350 ft. from E of NW, Sec. 138, Blk. 3, I.&G.N. Sur.	Cellar.
Saunders et al's No. 3 Sullivan, 822 ft. from W, 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur.	Will plug back to 3,275 ft. and shoot.
Skelly Oil Co.'s No. 3 Vicars, 330 ft. from S and E, Sec. 127, Blk. 3, I.&G.N. Sur.	Rig on ground.
Sun Oil Co.'s No. 2 Combs-Worley, 450 ft. from N and 660 ft. from E of SE, Sec. 35, Blk. 3, I.&G.N. Sur.	Location.
Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. 1, B.B.&S.F. Sur.	Location.
Tedesco Oil Co.'s No. 3 Morse, 330 ft. from N and E of NE SW, Sec. 1, Blk. 26, H.&G.N. Sur.	T.D. 2,515 ft; no gauge.
The Texas Co.'s No. 4 Bull, 1,65 ft. from S, 330 ft. from W, Sec. 2, Blk. B-2, H.&G.N. Sur.	T.D. 2,616 ft.; standardizing.
The Texas Co.'s No. 5-B McLarty & Lester, 990 ft. from N line, 950 ft from W line, Sec. 2, B.&B. Sur.	Drlg. 2,530 ft.
The Texas Co.'s No. 10 Cook-Faulkner, 330 ft. from S, 1,605 ft. from W, Sec. 29, Blk. B-2, H.&G.N. Sur.	Drlg. 2,375 ft.
Thorp et al's No. 1 Short, 330 ft. from N and E, Sec. 2, Blk. 1, H.&G.N. Sur.	Drlg. 1,775 ft.
Tripplehorn Bros.' No. 1 Lovett, 330 ft. from N and W, Sec. 57, Blk. B-2, H.&G.N. Sur.	T.D. 400 ft.; ran 12½-in. csg.
Travis et al's No. 2-B Webb, 990 ft. from S, 330 ft. from E of NW, Sec. 61, Blk. 25, H.&G.N. Sur.	Rigging up standard tools.
Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 67, Blk. 25, A.&G.N. Sur.	Spudding 250 ft.

HEMPHILL COUNTY

Hoover's No. 1 Hoover, 350 ft. from N, 1,300 ft. from E, G. S. Hood Sur.	To deepen old well; T.D. 5,055 ft.; bailing hole.

HUTCHINSON COUNTY

Baso's No. 1 Moore, 330 ft. from S, 330 ft. from E, in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur.	T.D. 3,080 ft.; estm. 5 or 10 bbls.; may plug.
Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur.	Spudded and S.D.
Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur.	S.D. 450 ft.
Holmes & Newblock's No. 2 Moore-Langdon, 330 ft. from N and W, Sec. 125, Blk. 4, I.&G.N. Sur.	S.D. for repairs 2,947 ft.
Huber Pet. Co.'s No. 1-A Weatherly, 330 ft. from N and W, Sec. 26, Blk. Y, A.&B. Sur.	Drlg. 3,000 ft.; T.P. 2,980 ft.; spraying 30 bbls. oil per day.
Huber Pet. Co.'s No. 2 Christian, 330 ft. from S and E, SW, Sec. 33, Blk. Y, A.&B. Sur.	Rig.
Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E, Sec. 6, Blk. 1, B.&B. Sur.	Plugged back to 3,146 ft.; S.D.
Oates & Morrow's No. 2 Starnes, 1,400 ft. from S, 650 ft. from E, Sec. 24, Blk. M-23, T.C.R.R. Sur.	Rig.
Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. Y, M.&C. Sur.	Shut down.
Rock Creek Oil Co.'s No. 1 Moyer-Johnson, 990 ft. from N, 330 ft. from E half SW, Sec. 34, Blk. Y, A.&B. Sur.	Rig.
Steckel Prod. Co.'s No. 3-D Whittenburg, 330 ft. from S and 990 ft. from W, Sec. 35, Blk. M-23, T.C.R.R.	Drlg. 325 ft.
Timme-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur.	Rig.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur.	T.D. 5,003 ft.

MOORE COUNTY

Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur.	S.D. 240 ft.
Interstate's No. 1 Nield, C NE, Sec. 13, Blk. 44, H.&T. C. Sur.	Rig up.
Pollard et al's No. 1 Hall, 330 ft. S and E, NE, Sec. 131, Blk. 3-T, T.&N.O. Sur.	Rig on ground.
Shamrock Oil & Gas Co.'s No. 2 Brumley, 330 ft. from N and W, Sec. 360, Blk. 44, H.&T.C. Sur.	T.D. 3,163 ft.; lost returns; show gas 2,957 ft.
Shamrock Oil & Gas Co.'s No. 1 Burnett, 660 ft. from S, 330 ft. from W, Sec. 359, Blk. 44, H.&T.C. Sur.	Rig.
Sunray Oil Co.'s No. 2 Jones, 330 ft. N and W, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur.	Rig.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur.	S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur.	S.D. 400 ft.
Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. S, G.C.&S.F. Sur.	T.D. 4,000 ft.; fishing pipe.

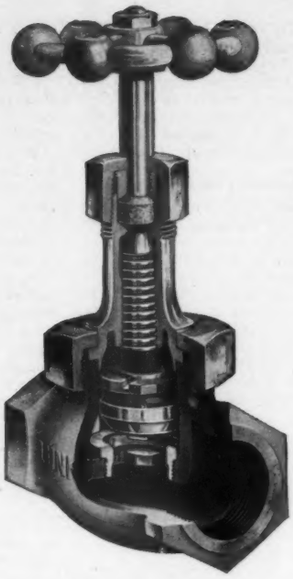
ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur.	Cmtd. cave 4,080 ft.
Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-2, H.&G.N. Sur.	S.D. 2,690 ft.

WHEELER COUNTY

Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24, H.&G.N. Sur.	T.D. 2,760 ft; swabbed 43 bbls. in 3 hrs.

STANDARDIZE ON LUNKENHEIMER



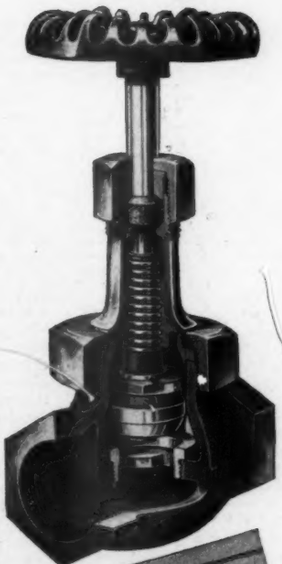


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Fig. 1021 "Ferrenewo"
and
Fig. 73 "Renewo"
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Quality products in every respect, these original Lunkenheimer designs effect extensive reductions in maintenance expense. Seats and discs are renewable and regrindable, and all parts of the two valves excepting bonnet rings are interchangeable. A single stock of repair parts is sufficient for both patterns, the 150 lb. W. S. P. "Ferrenewo" and the 200 lb. W. S. P. "Renewo".

Correct design and care in manufacture, together with rigid test and inspection, assure valves of unvarying quality.

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102-66-91

Deeper Producing Horizon Discovered in Logan County; Allowable Production Reduced

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

Discovery of a deeper producing formation in Logan County, reduction of the State's allowable production and extension of the State Corporation Commission's July proration order for the Oklahoma City Field to be effective in August also were among the week's developments in Oklahoma.

On account of the vacation recess of the Corporation Commission during August it was found to be impractical to hold a meeting at the end of the half-month period, so the July order was continued. The estimated allowables for the State show a decline of approximately 6,000 bbls. daily outside of the Oklahoma City Field. The estimated August allowables for the State, outside of the Oklahoma City Field, total 321,962 bbls. daily, compared with 328,718 bbls. for July. The purchasing companies nominated only 79,715 bbls. of oil daily from the Oklahoma City Field for August, compared with 87,350 bbls. for July.

Under the new order the Oklahoma City Field is permitted to produce 87,350 bbls. daily, which is approximately 7,600 bbls. in excess of the nominations made by the purchasing companies at the last public hearing. There is no change in the allotments of the flat allowables and water exemptions. The lime zone is expected to decline below 1,000 bbls. daily for the monthly average. The percentage of the potential production remains the same at 1.4.

The next hearing will be held August 29, at which time a state-wide proration meeting is also scheduled.

Five wells in the Oklahoma City Field were given until August 29, under the new order of the commission, to make up their underproduction. These have been listed for the last few months because of their inability to make their allowables. The order also gives 24 other wells in that field until the same time to make their allowables, and to recondition and flow to capacity to clear up underproduction.

Production Declines

A substantial reduction was reported in the State's daily average production for the week ending July 30, amounting to approximately 60,000 bbls. The State averaged approximately 393,850 bbls. daily for the seven days compared with 453,920 bbls. the previous week. Most of the drop was in the Oklahoma City Field, which declined approximately 53,000 bbls., and the Greater Seminole Field, which shows a decline of 7,000 bbls. daily.

State Allowables

The state allowable shows a decline of approximately 6,000 bbls. daily for August from the July allowables. Since the Corporation Commission placed the allowable of the Oklahoma City Field at 87,350 bbls. the same as in July, the state nominations now total 410,112 bbls. for August.

Outside the Oklahoma City Field the largest adjustment was made in Class "B" pools which show a decline of 4,454 bbls. daily unless the West Seminole and Sacred Heart potentials show larger than expected. The following table shows the estimated allowables for July and August:

Pool, Class "B"—	July	Aug.
Allen	8,305	8,006
West Asher	4,042	4,591
Bowlegs	11,697	11,547
Carr City	11,030	10,895
Earlsboro (proper)	11,766	10,504
East Earlsboro	8,824	8,773
Earlsboro Townsite	1,510	1,557
South Earlsboro	2,943	2,922
Konawa	4,746	4,925
Little River	17,614	17,574
East Little River	1,611	1,464
Maud	1,509	1,509
Mission	6,522	6,556
Sasakwa	1,617	1,141
Searight	3,165	2,941
Seminole	11,047	10,652
East Seminole	1,054	1,043
West Seminole	3,080	3,080
St. Louis	17,084	15,041
Subtotal	133,476	129,021
Class "C"—		
Chandler	3,815	3,807
Fish	2,500	2,500
Orlando	500	500
West Perry	800	800
Tatums	6,217	5,595
Wewoka Townsite	2,500	2,500
Subtotal	15,332	15,702
Class "A"	22,825	22,825
Others	156,281	154,410
Subtotal	179,110	177,239
Wildcats	800	800
Total	328,718	321,962
Oklahoma City	87,350	87,350
Total State	416,068	410,112

Nominations Reduced

The demand for crude oil from the Oklahoma City Field in August was estimated at 79,715 bbls. a day, a decline of 7,635 bbls. a day, from the second half of July. These nominations were made by representatives of the purchasers at the last hearing before the State Corporation Commission.

The principal decline was a 4,000-bbl. reduction by the Oklahoma Pipe Line Co. to 10,000 bbls. daily. The Independent Pipe Line Co. cut to 1,000 bbls. daily, from 1,500 bbls. because of refinery curtailment at Okmulgee. The White Oak reduced its nominations one-half to 1,000 bbls. daily. Nomination of 12,000 bbls. of the Wilcox Oil & Gas Co. was disallowed, since the company's 10 wells in the field are shut in by the commission's orders.

The Century Petroleum Co. increased its nominations from 1,500 bbls. to 2,500 bbls. and the Capitol Producing & Refining Co. increased from 150 bbls. to 400 bbls. daily.

Nominations for the second half of July totaled 87,350 bbls. while the daily average oil movement from July 15 to 25, averaged 91,904 bbls. daily. Following are the new and old nominations:

Company—	July	August
Champlin	2,000	2,000
Continental	2,000	2,000
Empire	15,000	15,000
Globe	7,000	7,000
Magnolia	3,050	3,050
Oklahoma	14,000	10,000
Shell	2,500	2,400
Sinclair Prairie	7,500	7,500
Stanolind	17,000	17,000
Tidal	200	250
Wilcox	3,200	....
Anderson-Prichard	100	200
Canadian	500	500
Capitol P. & R.	150	400
Century	1,000	2,500
Cushing	....	60
I. T. I. O.	5,000	5,000
Peacock	250	300
Petroleum	1,500	1,500
Independent	2,500	1,500
White Oak	2,000	1,000
Major Petroleum	400	530
Speedway Gasoline	300	....
Firestone	....	25
Total	87,350	79,715

The chief clerk of the proration office testified that 748 wells had a combined adjusted potential of 3,738,067 bbls. a day and would be eligible to produce during August. The lime zone averaged 1,033 bbls. and the water wells had increased to 196. It was estimated that 14 wells would be completed in August having a total for eight-hour tests of 81,500 bbls.

Shipments Fall Off

The pipe line companies purchasing crude oil in the Oklahoma City Field have reduced their nominations as shown by a comparison of the shipments from that field during May and June. The Oklahoma Pipe Line Co., which was the largest purchaser from the field in June, although its purchases were smaller in June than in May, also reduced its nominations for July. The company took a total of 605,708 bbls. in June compared with 740,973 bbls. in May. The total shipments from the field in June were 2,966,589 bbls. compared with 3,245,979 bbls. in May. Shipments of the H. F. Wilcox Oil & Gas Co. were not included in the May tabulation. The total movement of crude oil by companies was as follows:

	Barrels	
Company—	May	June
Champlin	64,249	61,831
Continental	123,777	93,534
Empire	550,658	429,240
Globe	221,759	258,208
Magnolia	184,514	176,107
Oklahoma	740,973	605,708
Sunray	71,677	41,512
Shell	53,730	50,595
Sinclair Prairie	151,739	158,126
Stanolind	622,449	575,180
Tidal	7,960	7,308
Wilcox	.....	108,805
Anderson-Prichard	5,505	2,783
Canadian	18,269	15,224
Capitol	5,769	4,471
Century	35,610	31,208
Cushing	.....	2,679
I. T. I. O.	211,461	156,589
Peacock	13,304	15,038
Petroleum	30,000	24,595
Independent	56,833	62,818
White Oak	32,291	22,345
Major	12,140	6,067
Singleton	397	2,090
Cement Ref.	915	758
Royaline	.....	2,000
Firestone	.....	798
Marshall (tank cars)	.....	50,456
Total	3,245,978	2,966,589

New Horizon Found

An interesting well discovered a deeper producing horizon in the old Roxana Pool in Logan County during the week. It was Shell Petroleum Corp.'s No. 6 McCully, NE cor. SW SE, Section 30-19-4w. It was originally a good producer in the Wilcox sand at 5,944 feet. After it was exhausted it was drilled deeper to a sand believed to be either the School Land or the Kinter at 6,169-73 feet, where it made 971 bbls. of oil and 2,000,000 feet of gas a day, flowing by heads. It is said to be the only well in the State outside of those in the Oklahoma City Field to have encountered this sand. It is possible that this discovery of a new producing horizon will lead to a redrilling of all the wells in this field.

Sinclair Prairie Oil Co. and others' No. 1 Kennedy, SE cor. NW, Section 4-13-1w, a wildcat in Oklahoma County, was spudding. The drilling of this test is expected to aid in defining the trend of the Nemaha, a buried mountain which has been explored as far north as central Kansas, and which extends south through the north central part of Oklahoma, through Lovell, and is believed to run west of Edmond to the Oklahoma City Field. The No. 1 Kennedy is believed to be on the Arcadia structure, which geologists say is located on the east flank of the Nemaha Mountain. Surface and subsurface indications are that the location is on a ridge extending from the main body.

The test may prove a theory that a southeast ridge extending from the mountain runs across the corner of Lincoln County and on south into northern Pottawatomie and Seminole Counties.

The Roxana Pool, the Eason Oil Co.'s No. 1 Cotcha well, in Logan County, and the Mid-Kansas Oil & Gas Co.'s No. 1 Messer well, Oklahoma County, indicate the trend of the buried mountain, in a due south direction from the Garber Field to the Oklahoma City Field.

The companies interested in the unitized block include the Amerada Petroleum Corp., Shell Petroleum Corp., Slick-Urschel, Inc., W. H. Atkinson, Gypsy Oil Co. and Sinclair Prairie Oil Co. An unusual condition exists in the vicinity of this test. There are two 80-acre tracts unleased a short distance from it, one is three-quarters of a mile to the west of W half SE, Section 5-13-1w, and the other is three-quarters of a mile to the south, S half NW, Section 9-13-1w.

Meters Installed

Meters are expected to be installed on all pipe lines in service in the Oklahoma City Field. Several of the major pipe line companies already have meters on their lines as ordered about a month ago and meters now are required on all lines from the field to loading racks, and on lines to refineries. The meters will be subject to check by the military authorities.

In the Oklahoma City Field on July 29 there were a total of 10 wells without pipe line connections. Most of these wells were newly completed ones. A dozen other wells are due for completion within the next month and it is expected these will have trouble getting pipe line connections.

From the present indications this condition may get serious unless some of the pipe line companies do some swapping about of connections in the field and furnish relief. At the last hearing the pipe line companies nominated only 79,715 bbls. a day for August, which is 7,600 bbls. a day less than was nominated for the second half of July. Previously the proration officials had little trouble getting connections for new wells. Some express the opinion that if the demand for crude oil should continue to decline, many of the one-well leases in the field will be left without connections.

Donleon Oil Co.'s No. 1 Burt, in Section 2-11-3w, in the north end of the field, has been without pipe line connection for several months and underproduction has accumulated to an estimated 25,000 bbls. to date. The company has appealed to the proration board and was prepared to present the case to the Corporation Commission but postponement of the hearing caused delay.

Hughes County Activity

The recent completion of a well west of Holdenville has stimulated activity in the area. Mid-Continent Petroleum Corp.'s No. 1 Jacobs, NW cor. NE SE, Section 9-7-8, was an old gas well drilled deeper into the pay horizon where it made 720 bbls. of oil a day. It formerly made 25,000,000 feet of gas a day from 2,875-2,913 feet and was drilled deeper to 2,927 feet.

Two offsets will be drilled, Mid-Continent Petroleum Corp.'s No. 2 Waterfield, SW cor. SE NE, Section 9-7-8, and the same company's No. 1 N. Jacobs, NE cor. SE, Section 9-7-8. Both tests are to be started at once.

Rigs were erected during the week for tests 2 miles west of Holdenville. Milan-Capshaw's No. 1 Holmes, SE cor. SW

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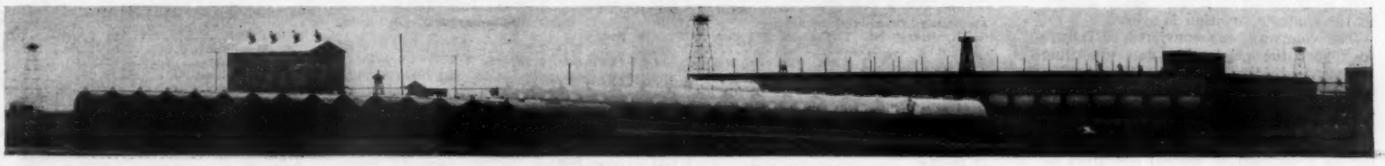
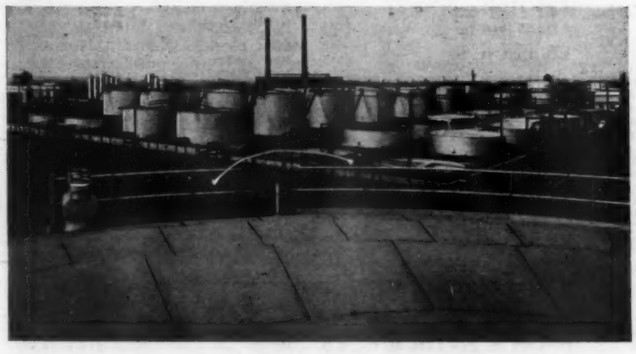


REFINERY EQUIPMENT



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SW, Section 11-7-8, and Felmee and others' No. 1 Genter, SW cor., Section 11-7-8, were rigs. The latter test will be a 1,200-foot one.

An Ellis County wildcat was preparing to start operations. This test, in the northwestern part of the State, is Charles Davidson Petroleum Co.'s No. 1 Roger, C SE NW, Section 21-20-24w, 4 miles north of Arnett. The drilling tools have been shipped out of Oklahoma City. The test is on a 7,000-acre block.

The only production in the northwestern portion of the State is the Sinclair Prairie Oil Co.'s No. 1 well, in Harper County, which was drilled to a total depth of 8,600 feet and plugged back to 5,400 feet and completed as a gas well.

Ellis County has held interest for geologists for several years and following the discovery of the Oklahoma City Field, large blocks of leases were assembled and the territory was worked by geologists and with geophysical instruments. During the last two years companies have surrendered a considerable number of leases and reduced their blocks until they cover only what is supposed to be the best part of the structure, in many cases reducing their rentals one-half.

Wilcox Case Postponed

The State Supreme Court was unable to reach a decision on the appeal of the Wilcox Oil & Gas Co.'s proration case after a hearing which lasted all of Wednesday. The status of the case remains unchanged until the court reconvenes in September.

Due to the absence of two members of the court no definite decision could be made, it was announced. Attorneys are expected to submit briefs to the court so that early action may be expected as soon as the summer vacation is over.

The company was convicted of failure to report the production and pipe line shipments to the Oklahoma Corporation Commission, and its wells were shut down several weeks ago.

The State Corporation Commission postponed until September 8 further hearing on a petition of several operators to change the flat allowable exemptions of wells in the Oklahoma City Field.

Beckham County

Price, McFann's No. 1 Webster, C SW SW Section 34-8-25w, was completed for 1,500,000 feet of gas a day from 1,890-1,900 feet.

Creek County

Johnson Oil & Refining Co.'s No. 3 Evans, NE cor. SW NW Section 29-19-9, is a rig. Same company's No. 1 Zickerfoose, NE cor. NW NW Section 1-19-9, was drilling at 300 feet. Vensel and other's No. 1 Cheattam, SW cor. Section 32-19-9, is a location. S. W. Anthony's No. 4 Muskogee, CSL NE NE Section 9-16-12, is a rig. Wallace and others' No. 1 White, SE cor. NW SE Section 3-15-7, is a rig on the ground. Johnson Oil & Refining Co.'s No. 1 Mann, SE cor. NW SE Section 32-19-9, was completed for 4,500,000 feet of gas from 2,064-75 feet. Gled Oil Co.'s No. 10 Koch, SE cor. NE NE Section 20-19-9, made 80 bbls. from 2,223-83 feet after a 210-quart shot. Same company's No. 1 Bible, NW cor. NE SW Section 21-19-9, was abandoned at 2,235 feet as a dry hole.

Greer County

Dovell and others' No. 1 Cufell, NW cor. Section 1-7-22, was abandoned at 1,760 feet as a dry hole.

Hughes County

Tate & Perkins' No. 1 Graham, CWL SE NW Section 23-7-8, is a machine. Nash-Redwine's No. 3 Robinson, C SE SW Section 15-5-11, made 2,000,000 feet of gas from 1,258-67 feet.

Marshall County

Liggett and others' No. 1 McDuffee, NW cor. SE SW Section 3-7s-6, made 7 bbls. from 791-821 feet. May Oil Co.'s No. 1 Garrett, SE cor. SW Section 33-6s-6, was abandoned at 900 feet.

Muskogee County

Mack Drilling Co.'s No. 1 Barrett, CWL SW NE Section 34-16-16, is a rig. Allred and others No. 1 Drew, NW cor. SW NE Section 17-13-16, made 10,000,000 feet of gas from 2,041-59 feet.

Lincoln County

W. J. Henry and others' No. 1 Strip, SE cor. NW Section 1-15-6, is a rig on the ground.

Okmulgee County

Wood Oil Co.'s No. 1 A. Brinton, SW cor. NW NE Section 4-14-12, is a rig. A. G. Hazlett and others' No. 3 Burton, SE cor. Section 25-14-12, is a rig. Home Oil & Gas Co.'s No. 1 Anderson, CEL NE NE Section 2-15-14, is drilling at 100 feet. Dodge Brothers' No. 3 Herrod, CEL SE SE Section 17-15-15, was drilling at 200 feet. F. D. Misener's No. 1 Morris, NE cor. NW NW NW Section 21-14-14, was drilling at 700 feet. Dodge Brothers' No. 1 Herrod, NE cor. SE SE Section 17-15-14, made 10 bbls. from 787-84 feet. Same operators' No. 2 Herrod, CNL SE SE Section 17-15-14, made 4 bbls. from 796-814 feet. Bryan Petroleum Co.'s No. 1 Corbray, SE cor. SW Section 23-14-14, was abandoned at 1,030 feet.

Oklahoma County

Phillips Petroleum Co.'s No. 1 Kolz, CSL SW NW Section 2-11-3w, was digging cellar. Same company's No. 3 Highland, CEL SW NE Section 10-11-3w, made 2,350 bbls. in three hours from 6,302-6,410 feet. Same operators' No. 1 Gentry, SE cor. SW NE Section 3-11-3w, made 8,381 bbls. in four hours from 6,295-6,435 feet. Same company's No. 4 Highland, CWL SW NE Section 10-11-3w, made 5,600 bbls. in four hours from sand at 6,300-6,434 feet.

Okfuskee County

Burke-Greis Oil Co.'s No. 1 Grayson, NE cor. NW SE Section 32-12-10, made 24,000,000 feet of gas from 3,530-77 feet. Keaton & Gold's No. 2 Taylor, NW cor. NE NW Section 18-12-11, was abandoned at 2,905 feet.

Payne County

Kemp & Nunnelee's No. 1 Mathews, SE cor. SW NE Section 26-17-6, was a rig on the ground.

Pottawatomie County

Huckleberry and others' No. 1-A (twin), NW cor. Section 35-8-4, is a rig. Null and others' No. 1 Brandenburg, SW cor. NW SW Section 35-8-4, is a location. Willman and others' No. 1 Wildfelt, SE cor. NE NE Section 3-7-4, is a rig on the ground. James and others' No. 1 Garrett, SE cor. NW Section 28-7-4, is a rig on the ground. Darby Petroleum Corp.'s No. 1 Youngblood, SE cor. NW Section 16-7-4, old well drilled deeper, made 10 bbls. from 4,126-31 feet.

Pontotoc County

Sutthin & Tilly's No. 1 Miller, SE cor. NW Section 27-5-6, is a machine. Delany and others' No. 1 Smith, CSL NE NE Section 29-5-8, is a location. Williams and others' No. 1 Kroth, NE cor. SE Section 33-3-4, is a location. Standolind Oil & Gas Co.'s No. 4 Roper, NE cor. SE NW Section 32-5-5, made 160 bbls. from 2,520-42 feet.

Seminole County

The Texas Company's No. 3 Sandlin, SE cor. NW SW Section 29-9-6, was digging a cellar. Same company's No. 4 Sandlin, NW cor. SE SW Section 29-9-6, was a rig on the ground. Amerada Petroleum Corp. and others' No. 6 Chase, SW cor. NE SW Section 29-9-6, was digging a cellar. Johnson and others' No. 1 Nowell, SE cor. SW NW Section 29-9-6, is a location. Droppleman and others' No. 1 Charty, NE cor. SW SW Section 29-6-6, was completed for 10 bbls. of oil and 20,000,000 feet of gas from 2,737-64 feet.

Stephens County

Pace's No. 1 A. Watkins, SW cor. NW NE SW Section 22-2s-7w, is a rig. Dunmar and others' No. 1 Lang, SE cor. NW SW Section 16-2s-6w, is a location. Willie and others' No. 1 Cates, SE cor. NW SW Section 15-1s-8w, is a location. W. T. Smith and others' No. 1 Thompson, SE cor. NW NE SE Section 17-3s-4w, was drilling at 600 feet. Parks & Palmer's No. 1 Palmer, NW cor. NE SE Section 31-1s-8w, was abandoned at 2,863 feet.

Tulsa County

S. W. Anthony's No. 1 Warley, SE cor. Section 4-16-12, made 500,000 feet of gas from 1,850-90 feet.

Wildcat Operations in Oklahoma

Northern Oklahoma

ALFALFA COUNTY

Company, farm and location— Remarks:

Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w ..... S.D. 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w.. S.D. 5,502 ft.

ATOKA COUNTY

Willis et al's No. 1 Roland, NW NE SE Sec. 6-1-15 ..... Drlg. 810 ft.
Hicks et al's No. 1 Norris, NE NW SE Sec. 15-1-15 ..... Machine.
Newman et al's No. 1 Bassett C NW Sec. 18-1-15 ..... S.D. 110 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w ..... Rig.
Price-McFann's No. 1 Webster, C SW SW Sec. 34-8-26w.. T.D. 2,344 ft.; plugged back to 1,890-1,900 ft.; 1,500,000 ft. gas.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w ..... S.D. 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w ..... S.D. 3,575 ft.

BLAINE COUNTY

Watonga Petroleum Co.'s No. 1 Masters, SW NW NW, Sec. 27-16-11w ..... Drlg. 282 ft.
Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w ..... S.D. 5,115 ft.

CADDO COUNTY

Abernathy & Brown's No. 1 Houston, Sec. 24-6-13w ... S.D. 1,115 ft.

CHEROKEE COUNTY

La Piere et al's No. 1 Woods, C SE SE Sec. 27-17-21 .... S.D. 1,504 ft.

COAL COUNTY

Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-8 ..... S.D. 2,395 ft.
Radial Oil Co.'s No. 1 McGraw, NE NW Sec. 2-1s-8 ..... S.D. 1,450 ft.

COMANCHE COUNTY

T. E. Bradley et al's No. 1 Pruitt, NE SW SE Sec. 8-1-9w. Abnd. 1,701 ft.
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 2-3-9w..... S.D. 1,450 ft.

CREEK COUNTY

E. L. Jillson et al's No. 1 Starr, SE NW Sec. 18-15-8 .... Drlg. 915 ft.

CUSTER COUNTY

Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w ..... Location.

ELLIS COUNTY

L. C. Hiersk's No. 1 Roper, C SE NW Sec. 21-20-24w .... Rig on ground.

GRADY COUNTY

English Drlg. Co.'s No. 1 Heenan-Coe, NE SE NE, Sec. 33-3-7w ..... Drlg. 2,702 ft.
Schoonmaker et al's No. 1 Station, NW cor. Sec. 35-4-7w.. T.D. 2,685 ft.; abnd.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w.. S.D. 5,850 ft.

GREER COUNTY

Dovell et al's No. 1 Capell, NW cor. Sec. 1-7-22w..... 5,000,000 ft. gas 1,455-65 ft.; T.D. 1,760 ft.
French's No. 1 Murphy, SW NW Sec. 23-7-21w..... S.D. 1,645 ft.

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19 ..... S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-19-9 ..... S.D. 200 ft.

HUGHES COUNTY

Hudspeth et al's No. 1 Harron, NW NE Sec. 3-5-5 ..... Location.

KAY COUNTY

Bluebaugh et al's No. 1 Indian, C NW NE Sec. 30-25-1... 10,000,000 ft. gas 2,556-62 ft.; mudding off gas est. at 5,000,000 ft.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1 ..... Location.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2 ..... S.D. 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 8-26-1w ..... Rig on ground.

KIOWA COUNTY

Christian's No. 1 Jones, NE SE Sec. 8-7-18w..... Drlg. 1,310 ft

LATIMER COUNTY

P. English's No. 1 Unknown, NW SE Sec. 16-6-19 ..... S.D. 1,542 ft.

LINCOLN COUNTY

Mote et al's No. 1 School Land, NW cor. Sec. 36-17-5 ... Wilcox 4,027-37 ft.; water; abnd.

NOBLE COUNTY

Wentz Oil's No. 1 Wolff, C SE NW Sec. 17-20-2w..... Drlg. 2,710 ft.

OKLAHOMA COUNTY

Sinclair Prairie's No. 1 Kennedy, C SE NW Sec. 4-13-1w.. Location.
Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w ..... S.D. 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w ..... S.D. 5,515 ft.

OSAGE COUNTY

Mohawk Oil Co.'s No. 1, NE cor. Sec. 10-26-9 ..... Drlg. 1,400 ft.

PAWNEE COUNTY

Rockstool's No. 1 Wylie, NW NE SW Sec. 6-20-5 ..... S.D. 1,950 ft.

PITTSBURG COUNTY

Tate Oil Co.'s No. 1 Fulton, SE cor. Sec. 34-7-14 ..... Drlg. 2,320 ft.
Nelson & Flynn's No. 1 Anderson, NE SW, Sec. 12-7-13... Spudding.

(Continued on Page 62)

ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ending July 30 follow:

	Bbls.
WYOMING	
Salt Creek	23,210
Big Muddy	1,650
Badger Basin	50
Byron-Garland	1,100
Dallas Derby	440
Dutton Creek	80
Elk Basin	470
Ferris	50
Frannie	150
Grass Creek	4,960
Greybull	0
Hamilton Dome	840
Hudson	410
La Barge	650
Lance Creek	90
Lost Soldier	1,860
Mule Creek	0
Midway	0
Notches	0
Oregon Basin	100
Osage	760
Pilot Butte	30
Rex Lake	0
Rock River	1,160
South Casper	0
Poison Spider	80
Teapot	20
Warm Springs	20
Total Wyoming	38,180
MONTANA	
Buckley-Border	560
Cat Creek	850
Dry Creek	840
Kevin-Sunburst	4,150
Lake Basin	40
Pondera	1,240
Total Montana	7,680
COLORADO	
Florence	300
Fort Collins and Wellington	760
Iles Dome	580
Moffat	700
Orchard	240
Rangely	90
Tow Creek	200
Total Colorado	2,870
NEW MEXICO	
Artesia	430
Caprock	1,025
Hogback	380
Jal	885
Rattlesnake	690
Table Mesa	75
Eunice	206
Hobbs	29,512
Lea	1,924
Texas-Pacific	95
Total New Mexico	35,520
Total Rocky Mountain area	84,250
Total previous week	81,510
Difference	2,740

GEORGE D. ROBERTS DIES

TYLER, Tex., Aug. 1.—George D. Roberts, 58 years old, an oil operator in fields in the Southwest for 25 years, died very suddenly at his residence here. His former home was in Tulsa. Mr. Roberts started in the oil business in the Oklahoma fields and has been operating in East Texas about a year.

Lake Asphalt Use Reduces Petroleum Asphalt Demand

(Continued from Page 21)

10 per cent in factory shipments of prepared roofing was reflected in sales of roofing asphalt, which were 15.9 per cent less in 1931 than in 1930. At the same time sales of roofing flux decreased 59.6 per cent. On the other hand, the greater mileage of secondary roads built by low-cost bituminous-mix processes in 1931 increased the sales of cut-back asphalts 70.6 per cent over those of 1930 and the sales of emulsified asphalt by petroleum refineries 14.7 per cent. Sales of waterproofing asphalt, waterproofing flux and molding compounds also showed large proportional increases from 1930 to 1931.

ASPHALT AND ASPHALTIC MATERIAL (EXCLUSIVE OF ROAD OIL) SOLD AT REFINERIES IN THE UNITED STATES, 1930 AND 1931, BY VARIETIES

	1930		1931	
Solid and semisolid products of less than 200 penetration:	Short tons	Value	Short tons	Value
Asphalt for—				
Paving	1,363,631	$15,046,978	1,124,252	$9,725,354
Roofing	842,755	9,049,729	708,850	6,053,780
Waterproofing	82,020	1,050,160	104,114	945,602
Blending with rubber	21,559	265,936	20,338	193,721
Briquetting	57,641	581,515	40,715	379,073
Mastic and mastic cake	2,255	35,338	957	12,581
Pipe coatings	10,423	147,135	12,737	154,031
Molding compounds	235	3,136	7,252	60,730
Miscellaneous uses	108,102	866,896	77,579	637,887
Total	2,488,611	$27,046,823	2,096,795	$18,162,765
Semisolid and liquid products of more than 200 penetration:				
Flux for—				
Paving	116,685	1,201,121	113,801	906,327
Roofing	315,270	2,863,907	127,262	901,021
Waterproofing	1,131	8,850	1,659	13,917
Mastic	353	2,610	42	357
Cut-back asphalts	261,633	3,118,848	446,413	4,221,536
Emulsified asphalts and fluxes	14,049	178,183	34,761	358,805
Paints, enamels, japans, lacquers	3,185	31,594	3,829	39,989
Other liquid products	*15,523	*170,096	48,729	256,622
Total	*727,829	*7,575,209	776,496	6,698,574
Grand total	*3,216,440	*34,622,032	2,873,291	24,861,339

*Revised figures.

East Texas Fields

(Continued from Page 35)

feet; No. 8 C. L. Braham, top sand 3,677 feet, initial production 72 bbls. per hour through tubing, total depth 3,708 feet; No. 11 W. T. Grissom, top sand 3,596 feet, initial production 108 bbls. per hour through tubing, total depth 3,637 feet; No. 4 Kangerga, initial production 105 bbls. per hour through tubing, on 2-inch lead, total depth 3,668 feet; No. 3 D. Ledbetter, top sand 3,681 feet, initial production 108 bbls. per hour through 2½-inch tubing, total depth 3,686 feet; No. 4 Jim Lunsford, top sand 3,652 feet, initial production 90 bbls. per hour through tubing, total depth 3,722 feet; No. 7 J. M. Price, top sand 3,646 feet, initial production 44 bbls. per hour through 2-inch tubing, total depth 3,712 feet.

Mose and Urschel's No. 4 Deason, top sand 3,655 feet, initial production 50 bbls. in 40 minutes through 1-inch tubing choke, total depth 3,760 feet. T. W. Murray's No. 1 C. A. and L. Darnell, top sand 3,805 feet, initial production 45 bbls. in one-half hour through open 2-inch tubing, total depth 3,807 feet. Navarro Oil Co.'s No. 1 John Bell, top sand 3,743 feet, initial productioin 150 bbls. per hour through seven eighths inch tubing choke, total depth 3,766 feet. Petroleum Marketing Corp.'s No. 2 M. M. Barksdale, top sand 3,676 feet, initial production 135 bbls. per hour through open 2½-inch tubing, total depth 3,745 feet.

Sinclair Prairie Oil Co.'s No. 32 Kinney, top sand 3,658 feet, initial production 160 bbls. per hour through open tubing, total depth 3,680 feet; No. 33 Kinney, top sand 3,645 feet, initial production 184 bbls. per hour through open tubing, total depth 3,660 feet; No. 13 Ledbetter, top sand 3,565 feet, initial production 125 bbls. per hour through open 2½-inch tubing, total depth 3,625 feet; No. 14 Ledbetter, top sand 3,627 feet, initial production 90 bbls. per hour through open 2½-inch tubing, total depth 3,667 feet. Standard Oil Co. of Kansas' No. 3 Wheelis, top sand 3,777 feet, initial production 64 bbls. in one-half hour through open 2½-inch tubing, total depth 3,782 feet. Stanolind Oil & Gas Co.'s No. 5 Mason, top sand 3,612 feet, initial production 46 bbls. in 27 minutes through open 2½-inch tubing, total depth 3,623 feet. Stanolind and Pure Oil Co.'s No. 13 R. A. Moores, top sand 3,609 feet, initial production 46 bbls. in 20 minutes through open 2½-inch tubing, total depth 3,617 feet; No. 14 R. A. Moores, top sand 3,625 feet, initial production 46 bbls. in 18 minutes through open 2½-inch tubing, total depth 3,636 feet; No. 17 W. H. Siler, top sand 3,596 feet, initial production 46 bbls. in 18 minutes through open 2½-inch tubing, total depth 3,634 feet; No. 18 W. H. Siler, top sand 3,629 feet, initial production 46 bbls. in 32 minutes through open 2½-inch tubing, total depth 3,677 feet.

The Texas Company's No. 3 Kersh, top sand 3,632 feet, initial production 80 bbls. per hour through open 2-inch tubing, total depth 3,631 feet; No. 8 First Guaranty State Bank, top sand 3,724 feet, initial production 108 bbls. per hour through open 2-inch tubing, total depth 3,760 feet. Trico Oil Co.'s No. 2 R. A. Motley, top sand 3,778 feet, initial production 40 bbls. in one-half hour through open 2½-inch tubing, total depth 3,781 feet.

Smith County

Arcadia Refining Co.'s No. 5-A Green, top sand 3,745 feet, initial production 80 bbls. per hour through one-half inch tubing choke, total depth 3,749 feet. Hunt Production Co.'s No. 8-A R. W. Fair, top sand 3,661 feet, initial production 37 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,676 feet. K.O.T. Oil Co.'s No. 3 S. S. Cooke, top sand 3,776 feet, initial production 56 bbls. in one-quarter hour through open 2½-inch tubing, total depth 3,780 feet. Mid-Kansas Oil & Gas Co.'s No. 25 M. M. Cross, top sand 3,612 feet, initial production 140 bbls. per hour through tubing, total depth 3,620 feet.

Smith County Oil Co.'s No. 2 S. S. Cooke, top sand 3,720 feet, initial production 46 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,722 feet. Smith-Guerin and King's test, top sand 3,697 feet, initial production 47 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,700 feet. Sun Oil Co.'s No. 5 E. O. Henson, top sand 3,626 feet, initial production 60 bbls. per hour through open tapered tubing, total depth 3,645 feet; No. 4-B H. A. Pace, top sand 3,713 feet, initial production 40 bbls. per hour through open tubing, total depth 3,719 feet. The Texas Company's No. 3-B Jarvis, top sand 3,678 feet, initial production 140 bbls. per hour through open 2-inch tubing, total depth 3,682 feet.

Upshur County

E.&D. Oil Co.'s No. 2 J. W. Free, top sand 3,723 feet, initial production 46 bbls. per day pinched, total depth 3,725 feet. Gibson Oil Co.'s No. 3 W. F. Smith, top sand 3,688 feet, initial production 90 bbls. per hour through 1-inch tubing choke, total depth 3,700 feet. Hawkeye Petroleum Co.'s No. 1 L. L. Mackey, top sand 3,674 feet, abandoned, total depth 3,674 feet (T. Hopkins Survey). Stanolind and others' No. 10-A J. J. Flewellen, top sand 3,687 feet, initial production 23½ bbls. in one-quarter hour through open tubing, total depth 3,702 feet.

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SYFO Clinograph

THE INK BOTTLE

Kansas Districts Continue to Yield Large Wells; Start New Wildcats in Western Counties

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

A 400-bbl. well was found in Greenwood County during the week producing from the Bartlesville sand, along the trend southeast of Hamilton. A. M. Landon and others' No. 1 Smith, CWL N half NW, Section 8-24-12, found the Bartlesville sand at 1,709-35 feet, and after a heavy shot it swabbed 700 bbls. of oil the first 30 hours. The well is swabbing 17 bbls. of oil an hour while cleaning out. Locations have been made for the north and south offsets to the well by the same operators.

The State's daily average production was holding steady and averaged approximately 95,800 bbls. daily for the week ending July 30. This is about 500 bbls. decline from the previous week.

The Kansas Public Service Commission postponed its decision at the hearing on July 27 on the application of the Vickers Petroleum Co., that an order be issued to allow the company to produce its Stoltenberg well in Ellsworth County at the rate of 100 bbls. a day. The Vickers Petroleum Co. offered testimony that the water intrusion caused by shutting in the well was injuring the well.

Several oil operators testified the production manager of the Vickers Petroleum Co. claimed his experience had proved to him that his company's contention was correct and should be upheld by the commission. Others testified that when all wells in a pool were shut in for a considerable period the water will settle back leaving only oil in the upper part of the producing formation.

An oil man attending the meeting but who did not testify told of an experience in Osage County, Oklahoma, with a lime well, which at the end of several years was pumping 700 bbls. of water and 35 bbls. of oil daily. The well declined to 22 bbls. of oil daily and was then shut down for 17 days. When opened and pumped again the first two days' production was all water and the next 12 days it produced little more oil than it had in any previous 30-day period. The well was again shut in for 45 days. When opened it produced oil entirely free of water, making 85 bbls. the first day and 75 bbls. of oil for several successive days. It made 700 bbls. of oil before it showed any water. This experiment has been continued ever since, at this well.

Owing to the wide variance of opinion of operators, the Kansas Public Service Commission has taken the case under advisement.

Wildcat Locations

Deep Rock Oil Corp. and others' No. 1 well in the C NW SW, Section 19-23-1, is a new wildcat location in Harvey County, southeast of the townsite of Newton. The leases were held by the Shell Petroleum Corp. which has a block of 1,600 acres extending 2 miles north and south and about 3 miles east and west. The block was farmed out to the Deep Rock Oil Corp. which will develop and drill the wells. The test will be drilled with cable tools and a standard rig is being erected.

Johnson Pool Potentials

The new Johnson Pool in McPherson County is considered the third major oil pool in the county and the fourth pool to be found. Of the four pools in the county the Johnson Pool, located southeast of the townsite of McPherson, is the newest. The ninth well was completed in the field during the week. It was Shell Petroleum Corp.'s No. 3 Johnson, NE cor. NW, Section 35-19-3w, and it was estimated to be making 25,000,000 feet of gas a day and spraying oil from the chat at a total depth of 2,998 feet.

The eight other wells producing in the pool have a potential of nearly 9,000 bbls. daily and are as follows:

Company and well—	Potential
Shell Pet., No. 1 Johnson	844
Shell Pet., No. 2 Johnson	900
Shell Pet., No. 1 Helstrom	1,200
Shell Pet., No. 1 Lawrence	300
Mid-Kansas, No. 1 Bridgens	2,900
Mid-Kansas, No. 1 Helstrom	622
Prunty and others, No. 1 Kasey	1,200
The Texas Company, No. 1 Tipton	1,000
Total	8,966

To the east of this pool is the Ritz-Canton Field with its 147 completed wells and a number of gas wells. This area is the largest ever found in the State and it is producing from the chat and Viola lime. The potential of this field on July 1 was approximately 125,000 bbls. daily. It covers an area almost 8 miles north and south and 5 miles east and west.

At the west edge of the field is the townsite of Galva and on the east side of the field is the Canton Townsite. On the northwest edge of the pool is the Decker gas field, which has a number of combination gas and oil wells. The central and east side of the field yields mostly from the Viola lime.

The largest wells in the State are found in the chat formation in this area; a recent completion made 14,300 bbls. a day while the Viola lime formation yields wells that average around 3,000 bbls. daily. The gas wells in the Decker gas field range as high as 56,000,000 feet a day.

To the northwest is the old Anderson or McPherson Pool, the first producing gas field in the county. It was discovered about seven years ago by Reeves, Merriam & Shidell.

The Voshell Pool, located about 6 miles south of the Johnson Pool, is producing from the Simpson and Misener sands.

Reno County Locations

Added to the nine operations now under way in Reno County, were three new locations which were staked during the week in the Blake district. Olson Drilling Co. and others continue to keep busy in that area, and have staked these locations.

No. 1 Sabin, C SE SW, Section 13-23-4w, is a location. No. 1 Fast, C NW NE, Section 25-23-4w, is a location south of No. 1 Regier. No. 1 Nelson, C NW NW, Section 30-23-4w, is a location, and is the south offset to No. 1 J. J. Krehbiel.

The same company is preparing to complete its No. 1 Rudicel, C SW SW, Section 24-23-4w, the north offset to the same company's No. 1 Roberts. It is expected to be a few days before the test will be drilled into the pay horizon. It was shut down at 3,227 feet.

On the west edge of Harvey County, Olson Drilling Co.'s No. 1 Day, C SW NW, Section 19-23-3w, was drilling below 3,000 feet.

Smith and Ash's No. 1 Kaegi, NW cor., Section 21-19-1w, in the northeast part of the Ritz-Canton Field, in McPherson County, is estimated at 30 bbls. an hour. It swabbed at this rate from the Viola lime at 3,353-83 feet. It is the second well completed in that part of the field in the Viola lime. Carter Oil Co.'s No. 1 Lagree, a diagonal offset, made 1,050 bbls. a day.

Stafford County Test

The southeastern part of Stafford County is to be tested. Stringer Drilling Co. and others' No. 1 in NW cor. NE, Section 2-25-11w, are moving in material and equipment to this location. The material is being moved from Ness County, and the rig should be completed and erected by the end of the week.

The test is about 1½ miles from the Reno County boundary line, in Stafford County, in a new wildcat area that has not been tested to date.

Tests are getting started in the south extension area of the Voshell Pool, in McPherson County. Oil States Oil Co.'s No. 1 Unruh, SW SE NE, Section 21-21-3w, was spudding with rotary tools. the test will be drilled with rotary tools to the top of the chat formation and then standard tools will be used to drill into the pay. It is about a mile south of production in the Voshell Pool.

Wildcat Wells Testing

The recent wildcat wells in central western Kansas are expected to be given a production test in a few days. These wells found the pay about two weeks ago and both wells were owned by the same interests, Slick, Pryor & Lockhart, Inc., Darby Petroleum Co. and Ainsworth Brothers. They were shut down to cement the casing before making a production test.

Both of these wells are located on a 27,000-acre block and they are 10 miles apart. No. 1 Orth, SE cor. NE, Section 27-18-10w, Rice County, was estimated during the week at 50 bbls. an hour. No test has been made after drilling out the cement plugs. The top of the Siliceous lime was found at 3,236 feet and the pay was found at 3,241-43 feet. When the oil was first found the well made 80 bbls. of oil an hour, running wild. The operators succeeded in bringing it under control by cementing the 5 and 6-inch strings of casing, shutting off the gas. Before this was completed it was estimated the well flowed between 3,000 and 4,000 bbls. of oil out on the ground. Most of this oil was picked up and pumped into stock tanks.

The same interests' No. 1 Breford, in SE cor. NW, Section 7-17-10w, Ellsworth County, is located about 3½ miles west of Holyrood. The oil in this well was found in the Kansas City Lansing lime at 3,140-52 feet. It is the first and only well to find production in this formation in this part of the State. It started flowing through the 8-inch casing and flowed over the crown block before it was brought under control. The 8-inch casing was cemented and it was drilling out the cement during the week. It will probably be tubed with 3-inch tubing and produced by flowing.

Between these two wildcat wells is the same interests' No. 1 Heiken, NW cor., Section 25-17-10w, Ellsworth County, which was the discovery well on this same block, drilled and completed in October, 1930. It was estimated at the time of its completion to be a 2,000-bbl. well from the Siliceous lime at 3,221-43 feet. All three wells are scattered in different parts of the block.

Skelton Oil Co.'s No. 1 Ott, C SE SE, Section 16-19-14w, Barton County wildcat, was drilling up a bailer after failing to fish it out of the hole. A string of 5-inch casing was removed and a new string landed at a total depth of 3,604 feet.

Cowley County

Witt and others' No. 1 Bevis, SW cor. SE SW NE Section 27-32-4, is a location. Dickey and others' No. 1 Smiley, NE cor. SE NW SE Section 27-32-4, is a location. Deal Oil & Gas Co.'s No. 1 College Gym, NE cor. SW SE Section 27-32-4, made 125 bbls. from 2,345-85 feet after a 125-quart shot. McMorrow's No. 1 Galyon, NE cor. SW NE Section 27-32-4, made 50 bbls. from sand at 2,360-92 feet.

Ellsworth County

Gypsy Oil Co.'s No. 1 McKinley, SW

(Continued on Page 50)

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location—	Remarks:
Smith et al's No. 1 Wilson, C NW SW Sec. 13-18-14w	Rig.
Midwest Ref. Co.'s No. 7 Scheufler, C SW SE Sec. 9-20-11w	Drlg. 3,305-24 ft.; swabbed 27 bbls. an hr. for 16 hrs.
Skelton Oil Co.'s No. 1 Ott, C SE SE, Sec. 16-19-14w	Set liner 3,530-46 ft.; show oil; C.O. 3,604 ft.

BUTLER COUNTY

Cameron-Great Basin Oil Co.'s No. 1 Lardson, C SE NW Sec. 13-28-2	Drlg. 1,430 ft.
Ramsey's No. 1 Michael, SW NW NW Sec. 18-27-3	S.D. 1,985 ft.

CHASE COUNTY

Ryan et al's No. 1 Lipp, C SE Sec. 35-18-6	S.D. 625 ft.

DOUGLASS COUNTY

Pure Oil Co.'s No. 1 Limb, NW SE, Sec. 21-14-19	Rig.

EDWARDS COUNTY

Mid-Kansas O. & G. Co.'s No. 1 Converse, SW NE NE, Sec. 30-24-18w	Drlg. 4,160 ft.

ELLSWORTH COUNTY

Gurley Bros. and Barnsdall's No. 1 Union Pacific, NW SW, Sec. 7-14-7w	Location.
Morgan's No. 1 Andrews, NE SW Sec. 3-17-3w	Spudded; S. D.
Walker et al's No. 1 Remley, SW SE NE Sec. 33-14-7w	Drlg. 1,195 ft.
Slick et al's No. 1 Dreford, SW NW Sec. 7-17-10w	Drlg. 3,140-50 ft.; 270 bbls.; shut in.
R. Gear et al No. 1 Kroboth, SE NW Sec. 12-15-10w	S.D. 50 ft.
R. Gear et al's No. 1 Sanberth, C SW SE, Sec. 29-16-3w	Drlg. 770 ft.

GRAHAM COUNTY

Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w	Rig.

HASKELL COUNTY

Victor Martin et al's No. 1 Martin, C NW Sec. 8-28-31w	Rig.

FINNEY COUNTY

National Ref. Co.'s No. 1 Wells, C SW, Sec. 13-23-32w	Drlg. 5,340 ft.

FORD COUNTY

Swain et al's No. 1 Henthorn, C NW Sec. 21-25-24w	Drlg. 5,205 ft.

HARVEY COUNTY

D. R. Louck's No. 1 Regier, SW SE NW, Sec. 9-22-2w	Drlg. 3,675 ft.
Liggett et al's No. 1 Davis, SW SE NE, Sec. 7-24-1	Drlg. 3,105 ft.

KINGMAN COUNTY

Panhandle Drlg. Co.'s No. 1 Wetheral, C SE NW SW, Sec. 26-28-10w	12-in. csg. 1,610 ft.; S.D.

McPHERSON COUNTY

Snyder et al's No. 1 Carlson, SE cor. Sec. 4-19-2w	S.D. 1,525 ft.
Detrick's No. 1 Dalke, NW SE Sec. 16-19-1	Drlg. 495 ft.

(Continued on Page 68)

Progress Made in California Curtailment Program But State's Output Yet Above Allowable

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., July 30.—Additional progress was made during the past week in advancing the California curtailment program but the state's output is still well in excess of the established allowable. There seems to be an apparent attitude of indifference on the part of some producers and for this reason Umpire Pemberton is experiencing a little difficulty in effecting the necessary reduction in crude oil production. Excess production in several fields is seriously jeopardizing the curtailment program, and, while the Standard Oil Co. has assumed a passive attitude in the face of overproduction, this position will not be maintained indefinitely. Upon the election of Umpire Pemberton, the Standard informed the Curtailment Committee that it could not maintain existing prices unless crude oil production was immediately reduced in conformity with the existing curtailment program. The situation has been further complicated during the past week by a softening of refined oil prices, with the result that conditions are again reaching a critical point. It is obvious crude oil prices cannot be maintained if the net back from refined oil sales is substantially reduced as a result of unjustified price cutting. Lub oil sales have practically diminished to the vanishing point with the result that gasoline is packing the entire load. Major executives are of the opinion that the present storm may be weathered if production can be immediately reduced to the established allowable and refined oil prices maintained at their present level. They are of the unanimous opinion, however, that a further reduction in crude oil production may be necessary later in the year unless the demand for refined products shows an unexpected increase before the end of September.

Deep Test in Midway-Sunset

The Standard is making an open hole production test on its No. 1 Mascot, a deep test in the Midway-Sunset Field of Kern County, but so far the well has failed to respond. No. 1 Mascot is bottomed at 9,629 feet and has a string of 5¾-inch landed at 9,302 feet. If commercial production is not secured at the present level the company will resume drilling. Due to a suspension of approximately 18 months, the drilling mud used during the course of work on this well may have packed off the lower portion of the hole, in which event an unsuccessful production test at present would not necessarily be of a conclusive nature. No. 1 Mascot is one of the most important tests under way in the San Joaquin Valley and the outcome will be followed with considerable interest, particularly by those interested in deep zone possibilities in the Midway-Sunset area.

Fruitvale

Drilling operations in the Fruitvale Field of Kern County showed a slight increase and a further gain is anticipated during the next 10 days. In the western end, opposite the Fruitvale Schoolhouse, the Western States Petroleum Co. is making preparations to conduct an early production test. Petrol's No. 1 Bloemer, offsetting No. 1 Unruh of the Western States Petroleum Co., is being cleaned out preparatory to an early test after being plugged back from 4,040 to 4,025 feet. No. 1 Unruh failed to show substantial production at 3,864 feet, and present plans contemplate deepening to approximately the 4,000-foot level. Western Gulf increased its drilling operations in the Fruitvale Field by spudding in No. 2 Bittle and is making preparations to start work on No. 1 Schmidt. General Petroleum made good footage on its Hensley project, which has recently passed the 3,000-foot level.

Kettleman Hills

Drilling operations have been substantially reduced by the completion of several successful producing wells during the past month, with the result that development work in the Kettleman North Dome Field is lower than at any time during the past six months. The Kettleman North Dome Association and the Standard are making preparations to start additional projects but even with the three wells now projected, drilling operations are expected to reach a lower level later this year as several potential producers are expected to be completed. The several wells finished in the Kettleman North Dome Field during the past month have substantially increased the field's potential daily production, although actual production has not shown any great deviation from the pegged allowable of 60,000 bbls. per day. No. 1 Elsinore of the North American has been pinched back in conformity with the curtailment program and will probably continue at its present rate for some time. This well, out on the north flank, was producing at the rate of 745 bbls. per day early in the current week, the output having entirely cleaned up coincident with an increase in the gravity of the oil to 37.9 degrees A.P.I. The Associated, barring the development of mechanical trouble, will probably finish No. 3 Whepley during the next four or five weeks. No. 1 Burbank of the Petroleum Securities in the Kettleman Middle Dome Field began showing a little life during the past week and made several flows of gas and water during milling operations at 5,163 feet. It has been held up for several months with mechanical trouble and an ultimate recovery looks extremely doubtful. The Standard's test in the Middle Dome is also held up with mechanical trouble due to a twist off in the drill pipe at approximately 5,500 feet.

Lost Hills-Belridge

The Lost Hills-Belridge Fields will apparently come in for a little additional drilling in the next 30 or 60 days but, as far as can be ascertained, operators in this area do not anticipate deep zone exploitation. In the North Belridge Field, where the Belridge Oil Co. revealed the existence of a new lower zone several weeks ago, Continental Oil Co. and Ohio Oil Co. are making preparations to resume drilling. Continental has staked location for No. 3 Result, a new well in the southern part of the field, and present plans call for the initiation of drilling during the next 15 days. This well is scheduled for completion in the Temblor zone and will not be carried to the deeper zone unless plans are changed after the Temblor has been reached. Ohio started to repair the rig on No. 1 Bloemer several days ago preparatory to an early resumption of drilling. Work is being resumed in order that the status of this lease may be determined and consequently this project may be carried down sufficiently deep to pick up the deep zone found by the Belridge Oil Co. This projected deep test will be drilled for the specific purpose of determining the value of the Bloemer lease before quitclaiming it. Drilling operations will be resumed at 5,986 feet, at which point work was suspended upon the failure to develop commercial production during the preliminary drilling campaign involving the North Belridge Field subsequent to the discovery of Temblor production over a year ago.

Ventura Avenue

Associated Oil Co. recompleted No. 83 Lloyd, its deep test in the Ventura Avenue Field, which was returned to production flowing 6,270 bbls. of clean 30.6 gravity oil and a little over 6,000,000 feet of natural gas per day. This well, the deepest project to be drilled in the Ventura Avenue Field and the deepest commercial producer in the world, was cleaned out to bottom, 9,700 feet, when it failed to come up to expectations on a preliminary production test conducted about 10 days ago. The production recorded during the week does not represent its potential maximum output as the well was beaned in immediately subsequent to its recompletion. If produced wide open, it would probably produce somewhere in the neighborhood of 8,000 bbls. per day. The completion of this deep well definitely proves the existence of a highly productive horizon and confirms the discovery of Associated's first well, No. 57 Lloyd, finished in this lower zone last year. The production of No. 83 Lloyd, while commercially profitable in any field, is somewhat under expectations, as it showed every indication of resulting in heavy production during the course of work. Premature blowouts were narrowly avoided, and prevented only after the use of heavily reinforced drilling mud. It is probable the copious use of heavy mud has cemented off the wall of the hole and prevented the well from showing maximum production. The most significant feature in connection with the completion of No. 83 Lloyd is the unusually low gas-oil ratio which, unlike other wells in this prolific field, shows only approximately 1,000 feet of gas to each barrel of crude produced. On the Ventura Land & Water Co. property, the Associated swabbed in No. 20 flowing approximately 200 bbls. per day from 7,071 feet. This well, flowing irregularly by heads, is showing a rather high cut and may ultimately be deepened. The Shell has killed No. 73 Taylor and will resume drilling operations at 5,050 feet.

Elwood

In the Elwood Field of Santa Barbara County, Pacific Western Oil Co. spudded in Caroline Spalding's No. 6 on tideland permit No. 92, but with this exception, no development work is under way at present. This new well, in conformity with the gentlemen's agreement of operators to refrain from deep zone exploitation, will be completed in the upper, or Vaqueros, formation. In the Santa Maria area of Santa Barbara County, the Union is making preparations to test No. 51 Newlove, an exploratory well started several months ago. Due to the fact that drilling operations in this field were consummated previous to the development of the core barrel, the Union has cored No. 51 Newlove practically all the way from the grass roots down to the present depth, 2,880 feet. Western Gulf's No. 1 Bradley, another drilling project in the Santa Maria area, is still held up with mechanical trouble and, while very little progress was made during the week, the fish which has been holding up progress may be recovered in the near future. No. 1 Bradley, the deepest well to be drilled in California up to the present time, had reached a depth of 10,290 feet before mechanical trouble developed. The Texas Company has definitely abandoned its No. 1 Community, a wildcat in the Carpinteria area of Santa Barbara County, and is making preparations to center its activities elsewhere. Continental Oil Co. made a concerted attempt to develop commercial production in the Carpinteria region a few years ago and, while a substantial gas well was brought in, wildcat exploration was ultimately found unsuccessful with the result that the company quitclaimed its leases. In the Los Alamos region, Barnsdall and Rio Grande plugged back No. 1 Careaga

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	147,070	987,352
Gasoline	308,720	44,103	.....	.....	4,705,071	8,286,939
Kerosene	.....	.....	.....	.....	154,372	157,589
Foreign exports—						
Crude oil	133,762	19,109	5,035	719	4,753,650	4,052,644
Fuel oil	56,008	8,001	162,211	23,173	4,816,169	8,074,438
Diesel and gas oil	348	50	9,738	1,391	1,401,301	2,155,294
Gasoline	56,855	8,122	45,007	6,430	5,049,382	5,162,498
Kerosene	86,481	12,354	.....	.....	1,422,117	977,700
Lubricants	.....	.....	.....	.....	.....	36,353
Naphtha distillates	.....	.....	.....	.....	120,075	.....
Coastwise-domestic—						
Crude oil	257,095	36,728	418,556	59,794	7,964,954	12,046,993
Fuel oil	228,182	32,597	184,061	26,294	6,842,991	7,426,662
Diesel and gas oil	1,604	229	21,489	3,070	726,957	869,444
Gasoline	188,777	26,968	340,000	48,571	8,502,971	7,698,313
Kerosene	2,208	315	3,646	521	98,549	261,804
Naphtha distillates	.....	.....	.....	.....	.....	4,952

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	231,170	.....
Gasoline	.....	.....	.....	.....	430,185	405,469
Lubricants	.....	.....	.....	.....	15,824	21,990
Foreign exports—						
Crude oil	73,575	10,511	.....	.....	781,226	107,736
Fuel Oil	.....	.....	.....	.....	582,109	798,303
Diesel and gas oil	.....	.....	.....	.....	352,107	294,708
Gasoline	60,918	8,703	116,488	16,641	2,089,131	2,418,822
Kerosene	86,682	12,383	.....	.....	635,540	536,972
Lubricants	.....	.....	.....	.....	24,934	.....
Naphtha distillates	.....	.....	.....	.....	.....	20,100
Coastwise-domestic—						
Fuel oil	84,122	12,017	72,803	10,400	1,620,370	2,278,550
Diesel and gas oil	.....	.....	.....	.....	238,094	195,112
Gasoline	74,250	10,607	.....	.....	1,907,065	2,072,741
Kerosene	.....	.....	.....	.....	65,756	174,344
Naphtha distillates	.....	.....	.....	.....	.....	49,780

from 5,331 to 4,250 feet and an early production test will be made. This test has been drilled to determine the possibility that a secondary or parallel structure to Gato Ridge might ultimately be found.

Buttonwillow

Milham Exploration Co. spudded in a new well in the Buttonwillow Gas Field of Kern County, No. 21-17 on S. P. Land Co. property, already down 2,480 feet. Milham's No. 14-9 on the same property tested wet following a squeeze job at 2,362 feet and the hole will be recemented. The Milham, discoverer of the Kettleman North Dome Field and the Buttonwillow gas field, has finished several substantial gas wells in the latter area up to the present. The Milham has a priority gas contract with the Pacific Gas & Electric Co. and will probably be in a position to make commercial gas deliveries from the Buttonwillow gas field during the coming winter. If the gas wells in the Buttonwillow Field hold up anywhere near their potentials, Milham should be able to deliver approximately 100,000,000 feet of natural gas per day to the Pacific Gas & Electric Co. if conditions warrant.

In the Devil's Den area, Pyramid Hills Oil Co. is reaming to set a string of 8⅝-inch in its No. 1, bottomed at 1,725 feet, to be in a position to make a production test in the event that the probable Temblor picked up in this hole may justify a production test. This well is approximately one-half mile from Tom Hannah's project in Section 25-25-18, which is drilling at 3,516 feet. The Devil's Den area has been prospected off and on for a number of years but so far has failed to yield commercial production. Years ago a little production was developed in this area, but it was not commercially profitable. In the McKittrick district, Thomas H. Purman has temporarily suspended drilling operations at 4,562 feet and no decision has been reached regarding when drilling will be resumed. This well is believed to have penetrated several hundred feet of Temblor formation and, while a little gas a few colors were noted from time to time, the well apparently did not have sufficient gas to justify a production test. Rio Grande has abandoned No. 1 Utting in the Shale Hills district as a duster at 3,181 feet.

Playa Del Rey

The Playa Del Rey Field, after several months of consistent overproduction, or at least a production in excess of the established allowable, has set an excellent example for other California fields. Operators in this district reduced their current production along with other fields and in doing so made it possible for the Standard Oil Co. to increase the posted price of crude oil during the latter part of June. Operators in this field have kept faith with the Standard since the increase in the posted price of crude oil and are to be commended for their recognition of the difficulties confronting the industry and their adherence to the curtailment program. The only work under way in this field consists of several reconditioning jobs where wells have ceased to be commercially profitable or where production may be slightly stimulated by either being deepened to the second zone or being plugged back to the upper horizon. A concerted attempt has been made to secure a drilling permit for a new well in the extreme eastern part of the Playa Del Rey Field, but considerable opposition has developed and the outcome of this petition is still in doubt. The application for the drilling permit was filed with the Los Angeles city council several weeks ago, but action has been retarded because the location is in a residential section of the Del Rey Hills. Protests have been filed with the city council by J. J. Donahue of the American Olympic Finance Committee, Coroner Nance, C. A. Copeland, chief of the record and research division of the department of water and power, Rev. H. A. Duce, representing Loyola University, and numerous other property owners. Completion of a fairly good well by the Union Oil Co. in the extreme eastern part of the Playa Del Rey Field several months ago revived hope of an additional extension to the eastern limits of production, with the result that several attempts have been made to secure a drilling permit. The Union's closest well is approximately 1 mile from the acreage involved, and since the company holds a lease on all intervening acreage up to the base of the Del Rey Hills, the projected outpost in the eastern end of the field would lie up on the mesa of the Del Rey Hills. In view of the rather unfavorable results obtained in development of the Playa Del Rey Field, it is doubtful whether a well in this area would be justified.

Dominguez Field

The Republic Petroleum Co. got a wet job in No. 1 Childs, an outpost in the Dominguez Field of Los Angeles Basin at 6,094 feet, and the hole has been recemented under pressure. This project is on property originally tested by the Shell Oil Co. and subsequently quitclaimed because of the inability to develop clean commercial production. If the Republic Petroleum succeeds in developing commercial production, it will have accomplished something which several petroleum engineers familiar with the field do not think possible. It might be possible of course to develop temporary production by extremely careful engineering work, but this would be only of a temporary nature due to edgewater encroachment at this point. Drilling operations in the Dominguez Field have been at a standstill for several weeks and, while no new work is contemplated during the next several months, there are still several holes to be reconditioned. This remedial work, which, in one or two cases, will necessitate deepening operations, will be more or less routine. In the Potrero Field of Los Angeles Basin, the Wilshire Annex Oil Co. set a whipstock in No. 1 Neace at 6,205 feet and, after making a little additional footage, set a second whipstock at 6,226 feet. The bit in this hole has just reached the original bottom of the hole at 6,242 feet but the orientation work undertaken is believed to have accomplished the desired result for the purpose of straightening the hole. On the Potrero Country Club property, Wilshire is drilling in three holes, the deepest of which has just passed the 5,200-foot level. Operators in the Long Beach Field held a curtailment meeting early in the week, and, after listening to the arguments of Umpire Pemberton, expressed themselves as being in entire accord with the curtailment program and pledged their future support. Upon being informed that a number of operators were exceeding their respective allowables, the assembly voted unanimously to have the umpire publish the names of operators who have consistently exceeded their alloted quota.

Kansas Fields

(Continued from Page 48)

cor. NW NW Section 6-17-9w, was abandoned at 3,315-50 feet after finding water.

Greenwood County

Mathew & Rex's No. 2 Reeser, NE cor. SE NE NE Section 7-24-12, is a machine. Lilly & Katz's No. 1 Kerson, NW cor. NE NW Section 7-25-9, was spudding. Landon and others' No. 2 Smith CEL SW NW Section 8-24-12, is a machine. Sinclair Prairie Oil Co.'s No. 1 Davis, C S half SE SE Section 6-24-12, made 137 bbls. from sand at 1,709-26 feet after a 60-quart shot. Landon and others' No. 1 Smith, SW cor. NW NW Section 8-24-12, made 440 bbls. from sand at 1,705-34 feet. Simmons and others' No. 1 Klassen, NE cor. SW Section 12-23-11, was abandoned at 1,910 feet as a dry hole.

Harvey County

Frost & Study and others' No. 1 Martins, C NE SE SE Section 19-22-3w, is a rig. Hollow and others' No. 1 School Acre, NE cor. SE Section 19-22-3w, is a rig on the ground. D. A. Louck's No. 1 Ratslaff, NE cor. NW SW Section 9-22-3w, was abandoned at 3,804 feet. Olson and others' No. 1 Nelson, C NW NW Section 30-23-3w, is a rig.

McPherson County

Darby Petroleum Corp.'s No. 1 Doane, NW cor. Section 28-19-1w, is a location. Lario Oil & Gas Co.'s No. 3 Gratton, SW cor. SW SW Section 24-19-2w, is a rig. Same operators' No. 13 Boal, NE cor. NW Section 24-19-2w, made 1,970 bbls. from sand at 3,407-12 feet. Derby Oil Co.'s No. 1 Neufeldt, SW cor. NW SE Section 21-21-3w, made 240 bbls. from sand at 3,080-3,140 feet. Magnolia Petroleum Co.'s No. 1 Stucky, SE cor. NE NE Section 28-20-3w, was abandoned in sand at 3,536-53 feet after finding water.

Reno County

Olson Drilling Co. and others' No. 1 Fast, C NE NE Section 25-23-4w, is a location. Same operators' No. 2 Krehbiel, C NW SW Section 30-23-3w, is a location.

Russell County

Billings and others' No. 1 Mermis, NW cor. NE Section 9-14-15w, is a rig on the ground. Same operator's No. 1 Witt, C NW SW SE Section 4-14-15w, made 120 bbls. of oil from sand at 3,037-42 feet.

Sedgwick County

Shell Petroleum Corp.'s No. 3 Brown, NE cor. SE SW Section 15-26-2, old well drilling deeper, was underreaming at 3,183 feet.

Woodson County

Theta Oil & Gas Co.'s No. 2 Shaffer, SW cor. NW SW SE Section 31-23-14, is a machine. Ward McGinnis' No. 2 Snyder, SW cor. NE SW Section 31-23-14, is a machine.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	31- 2-15	7,414	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Co-operative Dev. Co., No. 1 Del Rey, Los Angeles Co.	26- 2-15	4,140	sd. sh. drilling
Hogan, N. S., No. 1 Hawthorne, Los Angeles Co.	23- 3-14	rig	rigging up
Lawndale Pioneers, Inc., No. 1 Peck, Los Angeles Co.	20- 3-14	6,378	suspended
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7- 2-14	4,325	suspended
Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co.	17- 2-14	4,090	suspended
Kyle, W. A., No. 1 Inglewood, Los Angeles Co.	7- 2-14	4,318	wet
Pacific Western, No. 16 Inglewood, Los Angeles Co.	8- 2-14	2,570	sd. sh. drilling
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2-9	2,360	suspended
Jones, W. L., No. 1 Bell, Los Angeles Co.	31- 2-13	1,593	suspended
Weist Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	4,902	suspended
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	5,060	suspended
McNeil, W. A., No. 1 Montebello, Los Angeles Co.	7- 2-11	rig	suspended
Wardell & Monichini, No. 1 Montebello, Los Angeles Co.	7- 2-11	304	suspended
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,919	suspended
Caballero Estates, No. 1 Calabasas, Los Angeles Co.	33- 1-16	1,604	suspended
Marble, Willard, No. 1 Chatsworth, Los Angeles Co.	6- 2-16	1,395	suspended
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34- 3-16	2,402	sd. sh. drilling
Ajax Pet., No. 1 Newport, Orange Co.	31- 6-10	7,259	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	1,970	suspended
Mineral Exploration, No. 1 Capistrano, Orange Co.	8- 8-7	261	sd. sh. drilling
Orangethorpe Pet., No. 1 Bros, Orange Co.	32- 3-10	3,793	sd. sh. drilling
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	25- 7-10	3,599	suspended
Duncan, N. L., No. 1 Sagebrush, Riverside Co.	8- 4-6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1-2	2,392	suspended
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	670	sd. sh. drilling
Woods, D. H., No. 1 Salton Sea, Imperial Co.	7-11-16	764	sd. sh. drilling
Borderland Oil Co., No. 3 Encinitas, San Diego Co.	29-16-14	2,677	suspended
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18-2	1,243	suspended
Shannon, G. H., No. 1 Kearney, San Diego Co.	14-16-3	446	suspended

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Standard, No. 1 Santa Rosa Island, Santa Barbara Co.	unsurveyed	2,113	hd. sd. drilling
Barnsdall, No. 1 Los Alamos, Santa Barbara Co.	31- 8-33	5,331	plug 4,250 ft.
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	5- 9-33	10,294	fishing D/P
Wilson, N. S., No. 1 Los Alamos, Santa Barbara Co.	2- 7-35	4,979	suspended
Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co.	24- 4-29	3,291	br. sh. drilling
Bolsa Chica, No. 1 Coal Point, Santa Barbara Co.	25- 4-29	5,510	redrilling
Deuel & Associates, No. 1 Naples, Santa Barbara Co.	7- 4-29	5,134	resume work
Pacific Western, No. 1 Gibralter, Santa Barbara Co.	14- 5-27	3,345	suspended
The Texas Company, No. 1 Carpinteria, Santa Barbara Co.	33- 4-25	4,210	abandoned
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	suspended
Woodrow Pet., No. 1 Miguelito, Ventura Co.	4- 3-24	3,330	sd. sh. drilling
Continental, No. 1 Miguelito, Ventura Co.	23- 3-24	6,980	deepening
Miller, J. W., No. 1 Miguelito, Ventura Co.	23- 3-24	....	material
Bell, H. H., No. 1 South Mountain, Ventura Co.	22- 3-21	2,484	suspended
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20- 4-21	....	material
Superior Oil Co., No. 1 Timber Canyon, Ventura Co.	13- 4-21	1,564	sd. sh. drilling
Magu Synd., No. 1 Oxnard, Ventura Co.	17- 1-25	5,812	suspended
American Oil Co., No. 1 Conejo, Ventura Co.	33- 2-20	2,050	hd. sh. drilling
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	7,000	plug 2,800 ft.
Milham Expl. Co., No. 17 Buttonwillow, Kern Co.	17-28-23	2,480	sd. sh. drilling
Purman, T. E., No. 1 McKittrick, Kern Co.	22-29-21	4,610	suspended
Welport Oil Co., No. 2 McKittrick, Kern Co.	19-29-21	350	cleaning out
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,260	suspended
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Rio Cal Pet., No. 1 Shale Hills, Kern Co.	2-27-18	2,355	suspended
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	17-26-18	3,225	suspended
Hollaway, A. S., No. 1 Devils Den, Kern Co.	11-25-18	....	location
Hannah, Tom, No. 1 Devils Den, Kern Co.	25-25-18	3,516	hd. sd. drilling
Pyramid Hills Oil Co., No. 1 Devils Den, Kern Co.	24-25-18	1,722	reaming
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	3,060	sd. sh. drilling
Regina Oil Corp., No. 1 Mojave, Kern Co.	26-10-14	3,148	hd. sd. drilling
Meridian Oil Co., No. 1 Mojave, Kern Co.	11- 9-15	4,000	suspended
Harding, J. B., No. 1 Mojave, Kern Co.	5-10-10	1,030	redrilling
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	6,025	suspended
Descano Oil Co., No. 1 Tejon, Kern Co.	31-11-19	2,749	suspended
Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co.	30-16-23	2,970	suspended
Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo.	3-32-22	2,693	redrilling
Emerich Oil Co., No. 1 Carrizo Plains, San Luis O ispo Co.	22-32-22	1,981	br. sh. drilling
Trav-El Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	7-32-22	2,450	suspended
Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	36-31-13	3,352	suspended
Martin, J. D., No. 3 Edna, San Luis Obispo Co.	5-31-13	311	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	suspended
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	1-29-13	1,650	suspended
Shell, No. 1 San Miguel, San Luis Obispo Co.	4-25-12	....	grade
Pacific Inland, Well No. 1, Monterey Co.	19-23-15	2,340	suspended
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-23-14	1,051	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,157	suspended
Woodward, Glen, No. 1 Dudley Ridge, Kings Co.	32-22-20	569	suspended
Scott Bros. Drlg. Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,843	suspended
Lacal Natural Gas Co., No. 1 Dudley Ridge, Kings Co.	32-22-20	341	recemented
Kettleman Natural Gas Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,100	suspended
Irma Investment Co., No. 2 Dudley Ridge, Kings Co.	7-23-20	1,224	suspended
Triune Oil Co., No. 1 Dudley Ridge, Kings Co.	5-23-20	299	cemented
Dudley Dome Oil Co., No. 1 Dudley Ridge, Kings Co.	9-23-20	rig	suspended
Eagle Oil Co., No. 2 Dudley Ridge, Kings Co.	15-23-20	1,321	sd. sh. drilling
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	5,694	fishing
Kettleman Ridge Oil Co., No. 1 Avenal, Kings Co.	10-23-16	1,148	suspended
Mid-California Oil Co., No. 1 Avenal, Kings Co.	11-23-16	....	grade
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22	5,060	suspended
Guess, E. B., No. 3 Dudley Ridge, Kings Co.	12-23-22	1,840	suspended
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	3,200	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Sheldon & Gholson, No. 1 Porterville, Tulare Co.	34-22-27	483	suspended
Gravity Expl. Co., No. 1 Alapaugh, Tulare Co.	11-24-23	2,207	suspended
Ellis & Sanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,490	suspended
Napa Oil Co., No. 1 Griffith, Napa Co.	7- 8-3	3,051	sd. sh. drilling
Oakdale Oil Co., No. 1 Oakdalde, Stanislaus Co.	3- 2-10	4,791	sd. sh. drilling
Hilderbrandt, R., No. 1 Crows Landing, Stanislaus Co.	34- 6-7	3,130	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	30- 3-13	3,600	sd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo County	23-12-3	3,045	suspended
Easton & Monell, No. 1 Colma, San Mateo Co.	25- 3-6	3,130	suspended

Test East of Greasewood Finds Sulphur Water; Elk Mountain Wildcat Is Disappointment

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Aug. 1.—Plans which have been under way for some time to provide market facilities for oil produced in McKinley County, New Mexico, has been consummated and a pipe line is to be built from the Hospah Dome to Baca and a refinery erected at the last named point. Two tests in Santa Fe and Valencia Counties have spudded. Routine operations only took place in the Hobbs and other areas.

The test drilled half a mile east of production in the Greasewood Field in Colorado in Manning & Terry's No. 1 Niles found sulphur water in the Dakota sand and failed to solve the mystery of the source of the oil in the three producers. Two wells drilling farther to the northeast are running higher and will be closely watched. Two locations in Las Animas County were reported. Colorado had no completions.

In Wyoming the Midwest Refining Co.'s Elk Mountain wildcat in Carbon County was a disappointment and will be abandoned. The Osage Field had a good completion in the Chadron Osage Oil Co.'s No. 17 which made 130 bbls. natural the first 24 hours.

The Bannatyne Field in Montana, which has been shut in for the past three years is to be opened up and put on production as a result of a pipe line and refinery deal. One well was abandoned in the Whitlash district in Liberty County.

The Utah Southern Oil Co.'s deep test in the Salt Basin in Utah again is drilling in salt at 5,794 feet.

Washington reported one completion, a small gas well in shale formation.

NEW MEXICO

In 1930 the Walker Dome Oil Co. made a discovery of oil on the Walker Dome in its No. 2, NW cor. Section 14-15n-10w, at 1,014 feet. The oil was reported to be 55 gravity and to have a gasoline content of 65 per cent. It was never given a production test, but appears to be a small commercial well. There is considerable acreage on this structure and at Hospah which can be developed, and while a number of deep tests have been drilled in McKinley County, the possibilities for discovering some new pools have by no means been exhusted.

Lea County

A near completion in the Hobbs Pool is the Midwest Refining Co.'s No. 29 Turner, C SW NW (corrected) Section 34-18-38, in the southeastern part of the field, which is drilling at 3,975 feet in lime. The same company's No. 11 Terry, C NE SE Section 9-19-38, cemented 10¾-inch at 1,593 feet with 75 sacks and is waiting.

In the northern part of the field, Gypsy Oil Co.'s No. 2 Graham, NE cor. Section 24-18-37, cemented 9⅝-inch at 2,795 feet with 600 sacks and is waiting. It bottomed the salt at 2,580 feet. Empire Gas & Fuel Co.'s No. 4 Boon Hardin, NW cor. Section 19-18-38, is drilling at 1,125 feet in red rock after cementing the 12½-inch at 230 feet with 150 sacks, and Skelly Oil Co.'s No. 1 Turner, SE NW Section 34-18-38, in the southern area, is drilling at 635 feet in red rock after cementing 12½-inch at 223 feet with 200 sacks. Shell Petroleum Corp.'s No. 1 Lizzie Rice, SE cor. Section 13-18-37, spudded July 17, cemented the 12½-inch at 228 feet and is drilling plug.

In the Lea area The Texas Company's No. 3-A State, C Lot 2, Section 2-21-33, is drilling at 1,613 feet in the red beds.

In the Eunice area, Tidal Oil Co.'s No. 1 State, C SW NE Section 8-21-36, is drilling in salt and anhydrite at 2,185 feet. It topped the anhydrite at 1,235 feet and the salt at 1,340 feet.

Eddy County

R. Spearow and others' No. 1 McClelland, formerly New Mexico Oil Syndicate's No. 1 McClelland, SW NW NE Section 22-22-23, 25 miles west of Carlsbad, has been given permission to drill and material is being moved in. H. A. Stebinger of Portland is treasurer for the syndicate.

Flynn, Welch & Yates' No. 62 State, NW cor. SE Section 10-19-28, Artesia district, which made 4 to 5 bbls. per hour initial, has settled 25 bbls. per day on the pump.

Leonard & Levers' No. 7 State-Levers, C SW SE Section 20-17-29, Jackson area, is drilling at 2,268 feet. Nothing important has been picked up since it had 100,000 feet of gas at 2,170 feet.

De Baca County

Landowners Oil Co.'s No. 1 McAdoo, SW cor. NE Section 16-1s-27, Buffalo Creek, is bottomed at 5,014 feet in gray shale and is underreaming 6⅝-inch at 4,954 feet.

Chaves County

R. D. Compton's No. 1 Emerson, SW cor. SE Section 20-10-24, near Roswell, is drilling at 315 feet in gray lime.

San Miguel County

Starr Oil Co., Ltd.'s No. 3 Adams, NE cor. Section 25-17-17, Graham district, is bottomed at 5,093 feet and is trying to clear hole of collapsed pipe. Pioneer Oil Co.'s No. 1 Farmer, SE cor. NW Section 14-15-15, Montezuma district, is preparing to resume at 2,340 feet, where it has been shut down for some time, and is repairing rig.

Santa Fe County

Kelsey Clients Development Estate's No. 1, Section 26-10n-10e, Crow Butte district, is reported to have spudded July 14 in a 2,500-foot test and is drilling at 250 feet. This is a Los Angeles group, and John W. McGee has the contract.

Valencia County

Western Natural Resources Corp., Inc.'s No. 1 De Chaves, C NW NE Section 8-6n-1e, San Clemente grant, spudded in a 24-inch hole July 6 in the presence of county officials and others. The Guess Drilling Co. has the contract for a 5,000-foot hole with rotary tools.

San Juan County

Continental Oil Co.'s No. 29, Section 12-29-19, a shallow well at Rattlesnake, was completed for 50 bbls. in the Dakota series. Same company's No. 24, SW NW SW Section 1-29-19, the second deep test, is still cleaning out and having trouble with water. The 7-inch is cemented at 6,505 feet and total depth is 7,370 feet. It was cemented back to 7,000 feet. Its No. 17, C NE Section 2-29-19, the discovery well in the Pennsylvanian, is fishing for casing at a total depth of 6,985 feet. The 4½-inch is at 6,479 feet.

Southern Union Gas Co.'s No. 6 Angel Peak, Lot 2, Section 11-28-11, Kutz Canon district, is shut down at 1,669 feet waiting for drill stem, and Kutz Canon Oil & Gas Co.'s No. 1 Day, SW cor. Section 20-28-10, is bottomed at 3,797 feet and rigging up to run 5⅞-inch. It is on top of the Point Lookout sand.

Rio Arriba County

Governador Dome Oil Co.'s No. 1, NW NE SE Section 15-29-7w, is shut down at 2,642 feet and is not expected to resume for some time when a rotary may be installed. In the meantime rig is being erected for a test on the Blanco Dome in San Juan County.

COLORADO

Weld-Fort Morgan Counties

Manning & Terry's No. 1 Niles, C SE NE Section 13-6n-61, Greasewood area, a half mile east of Continental Oil Co.'s No. 1 Briggs, nearest producer, has drilled through what is believed to be the Muddy horizon and into the Dakota and does not look encouraging. The results as at present interpreted leave the Greasewood Pool more of a mystery than ever. This test, a joint operation with Continental Oil Co., Platte Valley Petroleum Co. and a Chicago syndicate, is bottomed at 6,720 feet, 11 feet in a fine gray sand which geologists identify as the Dakota. It carried sulphur water. Between 6,611 and 6,650 feet the drill went through several streaks of sand showing saturation which probably is the remnant of the Muddy, the producing horizon half a mile to the west. Preparations are being made to run 6,000 feet of 7-inch and cement and test the showings at 6,611-50 feet. Whether it will be carried to the Lakota if production is not found in the Muddy has not yet been determined. The well ran 80 feet lower than No. 1 Briggs, based on the top of the Niabrara, or Timpas lime. The interval between this horizon and the Muddy is much less than was found in the other wells and the conclusion has been reached that there is a faulted condition. Ohio Oil Co.'s No. 1 Butters, C SW SW Section 7-6n-60, to the northeast of No. 1 Niles, on the contrary, appears to be running high and is about 15 feet higher on the Timpas than No. 1 Briggs.

The direction of the fault which apparently runs through the field is not known, but probably it shuts off production on the east and leaves only the southeastern area to be tested. If this proves to be the situation, then Ohio's well may be on the high side of the fault and a producer. Some believe this fault may be a closure for the New Raymer structure and that the real pool will be found somewhere in that direction. The Dakota on both the east and west sides of Greasewood carried water and does not hold out any promise. One theory advanced is that the Dakota and Lakota are to be the real producing horizons when the structure is found and that the oil encountered in the Greasewood producers in the Muddy is seepage oil from the real pool. These are speculative theories and much remains to be learned about actual subsurface conditions. The long life of the three producers at Greasewood continues to point to a pool somewhere in that district and the results in No. 1 Niles has not changed that opinion, but only the theories to where it is located.

Ohio Oil Co.'s No. 1 Butters, C SW SW Section 7-6n-60, a half mile northeast of No. 1 Niles, was bottomed at 6,590 feet on July 27 and is preparing to run 7-inch pipe. Based on the Timpas, it is running 15 feet higher than No. 1 Briggs and much higher than No. 1 Niles. Top of the Niobrara was at 6,260 feet. This well is expected to be the next completion and its importance has been increased as a result of the new information now available.

Tulsa-Fort Morgan Oil Co.'s No. 1 Anthes, C NE NE Section 24-8n-59, 12 miles northeast, in a district where major companies have more than 100,000 acres blocked up, is now the center of interest. It is running high, one estimate putting it at 450 feet, based on the top of the Hygiene formation. There is some doubt as to where this formation was entered, due to its broken character, but the evidence is conclusive that the well is considerably higher than the Greasewood producers. It is drilling below 2,650 feet and carrying the 10-inch. Top of the Hygiene, according to one interpretation, is at 2,290 feet, which will put the main sand of that formation at around 2,850 feet. Another calculation put it a little deeper. If the Hygiene sand carrier gas, the 10-inch will be set and the gas saved for fuel in a rotary test to be drilled nearby. Should the Hygiene be lower and carry water, the 10-inch probably will be pulled and rotary used to go to the lower sands.

Weld Royalties Co.'s No. 1 Peters, SE cor. Section 28-9n-61, which spudded to 98 feet several weeks ago, is still shut down for 20-inch pipe to shut off surface water, Pipe has been contracted for.

Arapahoe County

MacDeb Drilling Co.'s No. 1 Fitzsimmons, NE Section 7-4s-66, near Aurora, is drilling again after cementing off 90 feet of cavey ground, and is making hole at 6,110 feet. While standing, about 50 feet of oil accumulated in the hole.

Washington County

C. M. Smith and others' No. 1 Middlemist, SE SW SE Section 14-4s-56, is standing at 1,600 feet waiting for casing to shut off caves.

Larimer County

Mayer Oil Co.'s No. 1 Reed, SW cor. Section 28-4n-69, Berthoud district, is standing at 3,870 feet. It is rather deep, but officials say it is not yet in the Muddy.

El Paso County

Colorado Springs Oil & Natural Gas Co.'s No. 2 Carson, NW NE NE Section 10-16-66, Fountain district, is shut down at 2,000 feet.

Park County

South Park Oil Co.'s No. 1 Milligan, NE cor. SE Section 13-8s-76, Jefferson district, is bottomed at 3,015 feet and trying to arrange for a string of 5⅞-inch pipe. It has had to cement frequently in the last 100 feet to stop caving. South Park Oil & Gas Co.'s No. 1 Esche, SE cor. NW Section 5-9s-76, is sidetracking spear at a total depth of 2,442 feet. It is in need of a string of 6¼-inch to shut off water and test the Dakota, above which it had a good show of oil.

La Plata County

J. W. Irwin & Co.'s No. 1 Doescher, SW cor. NW Section 29-33-13w, Dry Mesa, is rigging up cable tools to resume at 3,171 feet. It is believed to be on top of the Dakota, to which depth it was drilled with rotary.

Las Animas County

P. W. Harr and others' No. 1 Cordova, SE cor. NE Section 15-33-63, Gray Creek Dome, is moving in for a test to the Dakota at 2,000 feet. The Niobrara at 1,400 feet, which produces gas on the Garcia, or Barela structure to the south-

east, is a possible producing horizon. Petroleum Information, Inc., of Denver, did the geological work and spotted the well. The same interests have consolidated a block on the Gracia structure and made a location in the NW cor. NE Section 33-33-62, but it probably will not be drilled until after the Gray Creek test is completed.

Routt County

The Texas Company's No. 4 Carstarphen-Irwin, NE NW NW Section 5-6n-86, Tow Creek, is drilling and swabbing at 3,670 feet.

Moffat County

William A. Myers and others' No. 1 State, NW SW SW Section 16-4n-101, Skull Creek, is resuming at 2,950 feet, at which depth it has been shut down since last winter. Mr. Myers and crew went in the past week. This is the only Pennsylvanian test drilled in that county. S. H. Keoughan formerly was connected with the operation.

Rio Blanco County

Magnolia Petroleum Co.'s No. 1 Gladys Titley, NW cor. SW Section 15-2s-96, Piceance Creek, is drilling at 683 feet in gray lime.

WYOMING

Carbon County

Midwest Refining Co.'s No. 27 Union Pacific, NW SE SE Section 11-20-71, Elk Mountain, an important wildcat which started drilling in the fall of 1930, has proved a disappointment and will be abandoned. It had a show of gas in the Muddy at 4,196-4,208 feet and some oil saturation in the cores from the Dakota at 4,340-80 feet. It then standardized and set 6¼-inch at 4,340 feet. When the plug was drilled out, water came in and rose 1,700 feet in the hole. There was no sign of oil or gas. The bit was then run and shale was cut at 4,380-85 feet and water increased to 1,900 feet. At last reports it was drilling in the Lakota at 4,390 feet with nothing showing. This structure is 4 to 5 miles south of Simpson Ridge.

Lost Soldier Producing Co.'s No. 1, NE NE Section 25-26-88, Mahoney Dome, is bottomed at 3,765 feet, in the base of the Sundance, and is fishing.

Weston County

A good completion in the Osage Field was reported in the Chadron-Osage Oil Co.'s No. 17, SW NW SW Section 14-46-64, which flowed 130 bbls. natural the first 24 hours from sand at 2,028-38 feet. Lambie Oil Co.'s No. 8 Bock, SW cor. NW Section 14-46-64, is running 6¼-inch on top of the sand and gassing heavily.

West Osage Oil Co.'s No. 4, CEL E half W half Section 13-46-64, is spudding. Riggs Oil Co.'s No. 2, CEL SE NE Section 16-46-64, is drilling at 2,000 feet, and Central Oil Co.'s No. 1, NE cor. SW Section 15-46-64, is fishing. Federal Oil Co.'s No. 3, SE NE SE Section 15-46-64, cemented the 6⅝-inch at 1,850 feet and is waiting, and Tug Oil Co.'s No. 2, NE NW SW Section 15-46-64, is building standard rig. Wyoming-Dakota Oil Co.'s No. 1, SE SW NE Section 15-46-64, is drilling at 500 feet, and General Oil Co.'s No. 1, SE SW NW Section 15-46-64, set the 10-inch at 1,500 feet and shut down. The Homesteak-Osage Oil Co.'s No. 3, CSL SE NE Section 15-46-64, is spudding.

Julius Peters and others' No. 1 Witzell, SE cor. NW Section 30-46-64, Fiddler Creek, is sidetracking bailer at 4,430 feet, and Gose Oil Syndicate's No. 1, NE cor. Section 28-48-63, Soda Creek, is bottomed at 5,050 feet and waiting for 6,000 feet of 1-inch cable.

Park County

Henderson Producing Co.'s No. 10, SW NE NE Section 31-58-99, South Elk Basin, is drilling below 300 feet.

Converse County

Continental Oil Co.'s No. 30 Glenrock Sheep, SW SE SE Section 4-33-76, Big Muddy, is bailing to test after cementing 6¼-inch at 4,305 feet on top of the Lakota, and Ohio Oil Co.'s No. 25 Kinney, SE SW SE Section 4-33-76, is straightening crooked hole at 3,375 feet.

Natrona County

SE Section 14-35-79, Midway Dome, is Mutual Oil Syndicate's No. 2, C SW bottomed at 5,750 feet, about 250 feet off the Muddy, and reducing drill stem from 4-inch to 3-inch. The discovery well is showing an increase and is now producing around 200 bbls. per day.

Big Horn County

W. O. Taylor and others' No. 1 Hoskins, Lot 5, Section 25-56-97, Byron Dome, has rotary rigged and will spud as soon as the Government approves the drilling bond. Allen Oil Co.'s No. 1 Montana-Wyoming, Lot 52, Section 33-56-97, Garland Dome, is building rig for test to the Madison lime. The location is on the axis one location south of the company's shallow wells and seven-eighths of a mile south of Ohio Oil Co.'s No. 1 Easton, the discovery well in the Madison.

Fremont County

The Texas Company's No. 2 State-Ridgway, SE SW SW Section 36-34-95, Alkali Butte, is drilling and reaming at 1,700 feet. Yellowstone Oil Co.'s No. 1 Gabus, SW cor. Section 14-38-94, Shoshoni district, is drilling at 2,210 feet.

Sweetwater County

Wyoming-California Petroleum Co.'s No. 1, SE SE Section 23-17-104, Baxter Basin, is drilling at 3,725 feet and showing some gas in broken shale.

Sublet County

California Petroleum Corp.'s No. 7-H-2, Lot 10, Section 3-26-113, La Barge, is bottomed at 555 feet and running the 10-inch. Orienta Refining Co., which operates a small skimming plant in the La Barge Field and sells the output locally, is moving a rig from the Circle Oil Co. lease to a location half a mile south of the refinery.

Uinta County

Bear River Oil Co., Ltd.'s No. 1, Lot 3, NW SE Section 18-15-120, Yellow Creek district (W. S. Adams) is showing some gas at around 1,000 feet.

MONTANA

The Bannatyne Field, in Teton and Pondera Counties, which was brought into production three years ago, but which has been shut in for the past two years, is to be reopened and the wells put on production as a result of a deal whereby Perry L. Withers, president of the Conrad Refining Co., and associates have acquired the pipe line from the field to Collins, a small refinery at Collins built in 1929 by the Sterling Oil Co. and block of acreage in the field upon which there are 17 producers. The Bannatyne Pipe Line & Refining Co. has been organized with a capital of $250,000 to take over the properties. The field has 32 wells drilled in as producers in the Ellis sand at around 1,500 feet. The oil is 28 gravity and has an asphalt base. Production in 1930 was 21,000 bbls. The refinery at Collins was completed and about ready to begin operations when the depression started in 1929. It was sold at a sheriff's sale in 1931 and was bid in for a comparatively small sum. No deep test has been drilled in the field.

Carbon County

Ohio Oil Co.'s No. 7 Robinson, C SE SE Section 3-7s-21, Dry Creek, cemented the 8⅝-inch on top of the Dakota at 5,536 feet and is waiting. It showed a small quantity of gas. Same company's No. 8 Caldwell, SE SW NE Section 12-7-21, is drilling in the red beds at 6,469 feet and the Embar is the next objective. The Dakota and Lakota had water. This is the first test to the horizons below the Sundance in the field. Ohio's No. 11 Bowman, C SE NE Section 4-7s-21, is drilling at 4,414 feet in shale.

Carbon Oil & Gas Co.'s No. 1 Armstrong, SW cor. NW Section 7-7s-22, eastern end of the field, is still testing to determine source of water showing in the hole. The well makes flows at irregular intervals and puts about 60 bbls. of oil into the tank at each head. Same company's No. 1 McMinn, NW SW SW Section 7-7s-22, is shut down at 4,479 feet.

Liberty County

A. E. Crunley's No. 1 Strode, C NW NE Section 35-37-4e, Whitlash district, a mile south of the discovery well, was abandoned at 2,410 feet in a water sand. The first sand at 2,285-2,310 feet also carried water. R. C. White's No. 1 Hicks, C NE NE Section 26-37-4e, one-fourth of a mile to the east of the discovery, is drilling at 1,960 feet. The first sand at 1,625-77 feet had an average showing of oil. Whitlash Petroleum Co.'s No. 1 Hicks, NW NE Section 26, a west offset to the discovery, pumped 20 bbls., about the same as the discovery, from sands at 1,653 and 1,792-1,848 feet. Casper Oien's No. 1 Hicks, C SE NE Section 26, is drilling at 1,312 feet, and H. L. Postlewaite's No. 1 Hicks, C SW NE Section 26, is drilling at 2,485 feet and getting deep.

People's Oil & Gas Co.'s No. 1 First National Bank, C SE NW Section 17-36-6e, Bear's Den, is still trying to overcome pipe trouble at 2,000 feet.

Glacier County

The Texas Company's No. 1 Peterson, SW NE SE Section 22-36-5w, Cut Bank district, is drilling at 1,690 feet.

Yellowstone County

Spokane-Laurel Oil Co.'s No. 1 Nutting, SW cor. SE Section 30-2s-24, Laurel district, cemented 6¼-inch at 1,385 feet and is cleaning out.

UTAH

Utah Southern Oil Co.'s No. 1 Balsey, C NE NE Section 31-23-21, Grand County, is drilling at 5,794 feet and is in salt again after passing through several hundred feet of shale. Brendell Oil & Gas Co.'s No. 1, SE SW SE Section 4-22-19, Grand County, is drilling at 3,150 feet in salt.

WASHINGTON

C. T. Lupton, consulting geologist, Denver, has returned from a trip to Washington where he did some field work for Northwest Oil Research Corp. of Wenatchee. He went over the situation in the central plains area and returned much more optimistic over the gas possibilities. He said that while oil may

Hundred Years of Gas Development in New York Shows No Abatement

By SPECIAL CORRESPONDENT

CORNING, N. Y., July 30.—Ontario County, the territory where the Mid-East Gas Co. and L. S. Panyity have blocked about 20,000 acres, J. Brooke Reed 8,000 acres and H. G. Burns & Son 10,000 acres on which they will drill for gas, has had over 100 deep sand gas wells drilled within its borders in the past 50 years, according to a review of the natural gas development of New York by State Geologist D. H. Newland and his assistant, C. A. Hartnagel. The following facts are taken from their review:

Canandaigua is the county seat of Ontario County. The main gas-producing region has been in the town, or township, of West Bloomfield, along Gates Creek. Most of the gas in this area has come from Medina sandstone, at depths ranging from 1,800 to 2,200 feet. Initial production has varied from a small production up to 1,000,000 feet per day. The town, or township, of East Bloomfield has shown a few paying gassers around 2,000-50 feet. Other formations yielding gas in Ontario County have been the Hamilton and Marcellus shales, but the gas production has been smaller than the Medina sandstone. The Hamilton shales were found around 640-688 feet and the Marcellus shales from 688 feet to the top of the Flint at 717 feet, with the gas at about 700 feet. This gas had a strong odor of oil, and some of the sand pumpings showed a trace of oil.

In the towns of Richmond and Bristol, where the Medina sand lies at about 2,200 feet, some paying gas wells have been drilled.

Back in 1884 a small gas field was developed near the village of Naples in the southern part of the county. The source of the gas was the base of the Marcellus shales and was found at a depth of 1,050-1,150 feet.

A dry hole drilled in the village of Cheshire, 5 miles south of Canandaigua, found Onondaga limestone at 800 feet. This is the gas sand which is found in the Dundee-Wayne Field at about 2,050 feet and in Tioga County at about 4,300 feet and in Potter County, Pennsylvania, below 5,000 feet.

In the northern part of the county not far from the line of outcrop of the Onondaga limestone several wells were drilled between Victor and Geneva. One well was drilled near Clifton Springs to test the Onondaga and lower formations for oil, the Onondaga having been found to be saturated with oil at the outcrops and in quarries. The test was dry and abandoned at 680 feet.

The well drilled near Geneva was abandoned at 1,100 feet. It was drilled 47 years ago.

Panyity, a geologist of note, has again called attention to this old territory and the other operators who have become interested in Ontario County's gas prospects are experienced men in the oil and gas business. The tests to be drilled on the three blocks will be watched with interest.

While the volume of gas produced in New York states is not to be compared with the tremendous production of Texas, Louisiana and some other states, it is interesting to note that gas in commercial quantity has been and is being produced in Chautauqua, Cattaraugus, Allegany, Steuben, Erie, Genesee, Wyoming, Livingston, Monroe, Ontario, Yates, Schuyler, Onondaga and Oswego Counties.

The first commercial use of natural gas was in Fredonia, Chautauqua County, over 100 years ago. The most active recent development has been in Schuyler, Yates and Steuben Counties, all Onondaga limestone gas fields, and the development has spread from those counties to Tioga and Potter Counties in Pennsylvania, where gas wells as great as 100,000,000 feet per day have been found within the past 18 months. It is interesting to note that deep wells have been and will yet be drilled for gas in the old Allegany Field in Allegany County, New York, and that the belief prevails that big gas production from deep horizons will be developed in McKean County, Pennsylvania, the home of the famous Bradford oil field, and the once great Kane gas field.

The production of natural gas in New York state from 1920 to 1929, a 10-year period is given as 69,398,000,000 feet. Figures are not at hand as to the total volume of gas produced in the state in the past 100 years.

Surveying for Pipe Line

Survey is being made for the 46-mile 20-inch gas pipe line from the Farmington gas field in Tioga County to the Hebron gas field in western Potter County, Pennsylvania. The line will be built by Lycoming Natural Gas Corp.

R. H. Hungiville and others' No. 2 Booth on the farm where the Hebron discovery well was drilled by the same operators, is down 2,200 feet and Rogers and others are below 900 feet and were running casing in No. 1 Claire in Hebron Township. McGraw and others have started drilling No. 1 Gale in the Andrews Settlement, Potter County.

be found in that area, the prospects are more favorable for gas. This area is centrally located for one of the most important unappropriated gas markets, the Pacific Northwest, with Seattle, Portland, Tacoma and Spokane the principal cities to be served.

Gray's Harbor County

Ohio Oil Co.'s No. 1-A Robinson, Section 5-17n-9w, Aberdeen-Hoquiam district, cemented 13⅜-inch at 2,312 feet and is waiting. Above this depth it has had some shows of gas in shale.

C. S. Shippey and R. E. Henderson of Kansas, who produce shale gas commercially in that State, have taken over Vesta Oil Co.'s No. 1 Wagner, Section 5-15-7w, Montesano district, and completed it as a shale gas well at 650-1,112 feet. It was plugged back from 1,500 feet, where it had water. It was not gauged, but through a 2½-inch pipe it built up a pressure of 200 pounds. The gas comes with salt water and the conditions are much similar to those found in the Kansas shale gas fields. A separator will be installed and the flow gauged. It is estimated at close to 1,000,000 feet per day. The rig is being moved 600 feet south for No. 2 Wagner.

Clallam County

Mordello L. Vincent and others' No. 1 Rosalie, Section 9-28n-13w, Fork district, joint with Forks Prairie Oil Co., is building a derrick. Rig used in drilling No. 1 Olympic, NW SW Section 9-28-14, will be moved to location.

Jefferson County

Leslie Petroleum Co.'s No. 1 Sims, Section 12-26-14w, Hoh River structure, is shut down at 2,200 feet waiting for rotary rig from California. It is expected to resume late in August. This well had a production of about 50 bbls. per day in upper sands which was mudded off in drilling deeper.

Yakima County

Simcoe Oil Co.'s No. 1, NW NW Section 24-11-17, Simcoe Indian Reservation, is trying to straighten hole at 2,760 feet, and the Miocene Petroleum Co.'s No. 1, NE NW Section 17-12-19, Union Gap, is drilling at 2,725 feet in lime.

RANGER CRUDE TO HOUSTON

The following statement was issued by R. S. Ellison, president of Stanolind Crude Oil Purchasing Co.: "There have been various announcements recently concerning the Ranger crude in storage which was purchased by Stanolind Crude Oil Purchasing Co. from Sinclair Prairie Oil Marketing Co. This crude was not purchased to move to Standard Oil Co. (Indiana) refineries. It was purchased in order to fulfill a contract whereby the Stanolind Crude Oil Purchasing Co. delivers a certain quantity of crude to the Sinclair Prairie's refinery at Houston. Sinclair Prairie furnishes this crude in the field and was unable to furnish all of the required amount from leases, making it necessary to move storage crude from Ranger to Houston."

SOUTH AMERICAN COMPLETIONS

NEW YORK, Aug. 2.—International Petroleum Co., Ltd. [Standard Oil Co. (New Jersey)] completed three wells, with average initial production of 656 bbls., in Colombia during the first five months of the year, while three producers, with average initial output of 49 bbls., were completed in Peru during the same period. The company produced a daily average of 23,168 bbls. of crude in Peru during June and 54,250 bbls. daily in Colombia during the month, making a total of 77,418 bbls. daily for the two countries. This compared with 24,432 bbls. daily in Peru and 54,269 bbls. per day in Colombia during the preceding month, or a total of 78,701 bbls. daily average output. For the first five months of the year, total production by the company in Peru was 3,147,078 bbls. and in Colombia 7,942,920 bbls.

Large Gas Well Completed in Kinsella Field; Decline of Pressure in Turner Valley Area

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, July 30.—Recent development in east central Alberta has been featured by the drilling in of a large gas well in the Kinsella Field east of Edmonton. Northwestern Utilities' No. 1 Harvey, LSD 1, Section 17-47-11w4, got the gas sand at 2,148 feet. Pipe was set and in the first 20 feet of sand the test developed 2,000,000 feet a day, which was increased to 7,600,000 feet when the test finished at 2,177 feet.

Completion of No. 1 Harvey further proves the Kinsella Field, which was first opened by Duluth Syndicate's No. 1 wildcat in LSD 3, Section 29-48-10w4, some three years ago. The discovery well had an open flow variously estimated from 25,000,000 to 40,000,000 feet a day, but has been shut in for lack of a market. The Duluth Syndicate was later incorporated as Messaba Oil & Gas Co. and the discovery well is now listed at Messaba's No. 1.

Northwestern Utilities' No. 1 Harvey is some 12 miles southwest of Messaba's No. 1 and about the same distance southeast of the center of the Viking Field, whose production, practically controlled by Northwestern Utilities, Ltd., is piped by that company to Edmonton. No. 1 Harvey has a larger initial flow than any well yet drilled in the Viking Field. The log of the new gasser more nearly approximates those of wells in the Viking Field than that of Messaba's No. 1. The Kinsella Field has been regarded in some quarters as a continuation of the Viking Field, and the recent completion indicates the possibility of this, or of material extension of both areas.

The outfit from Northwestern Utilities' No. 1 Harvey will be moved to No. 2 Harvey, which will start work within a few weeks. The new completion increases the company's gas reserve for the Edmonton to 122,600,000 feet.

Turner Valley Deep Test

In Central Turner Valley, McLeod Oil Co.'s No. 4, LSD 16, Section 1-20-3w5, is reported drilling at a new record depth for Canada of more than 6,702 feet. The bailings show a continuance of 40 gravity oil, with a fair gas flow. The outfit is running three tours.

New McDougall-Segur Oil Co.'s No. 5, LSD 14, Section 12-20-3w5, is drilling below 1,000 feet on a shallow test of the McDougall-Segur light crude sand. Roy Widney is in charge of the drilling.

North Turner Valley

In the North Turner Valley, Model Oils' No. 2, LSD 16, Section 22-20-3w5, is reported making new hole below 3,865 feet after straightening. Shareholders of Model Oils, Ltd., at their annual meeting at Calgary re-elected the following officers: President, W. R. McArthur; vice president, Frank Proby; managing director, William C. Fisher; secretary-treasurer, Thomas W. McKee; directors, Harry Groves, W. Grant MacKay, C. W. Barber. Model's No. 1 in North Turner Valley was reported to have produced 61,355 bbls. of crude oil in 1931 with profits of more than $76,000, out of which nearly $50,000 in dividends was paid.

South Turner Valley

In South Turner Valley, Canadian Royalties' No. 1, LSD 9, Section 5-19-2w5, is drilling below 2,670 feet and reported logging about 500 feet higher than other tests in the same area.

In the far south, Mar-Jon-Freehold's No. 1, LSD 9, Section 28-18-2w5, is drilling below 4,415 feet.

Turner Valley Conservation

The Turner Valley Gas Conservation Board has ordered further testing for a 12-day period of 23 producing wells in the South Turner Valley area. The wells include Commonwealth's No. 1; East Crest's Nos. 1, 2 and 3; Homestead's No. 1; Hylo's No. 1; Mercury's Nos. 1, 2 and 3; Miracle's Nos. 1 and 2; Mill City's No. 1; Mayland's Nos. 1, 2, 3 and 6; Southern Lowery's Nos. 1, 2 and 3; Southwest Petroleum's No. 1; Merland's No. 1, and Sterling Pacific's Nos. 1 and 2. The area affected includes Sections 4, 5, 8, 9, 16 and 17, Township 19-3w5, and Sections 27 and 34, Township 18-2w5; and the wells undergoing this second test are among the newest and best producers in the field. After the wells have been maintained at an unvaried pressure for 12 days, pressure is to be increased to 500 pounds for 48 hours or a minimum safe pressure to determine gas flow.

Wells not covered by this supplementary test have been placed on a new prorating, according to a new schedule of maximum production compiled after the completion of the general tests of the field early in July.

Results of Field Tests

Some information has been made public as to the results secured recently in the general testing of the field, in comparison with the previous tests in August, 1931. The compilation made by the Turner Valley Gas Conservation Board indicates that 3 out of the 11 areas into which the field has been divided would, within three years, not have enough pressure to deliver gas to Calgary; while at the previous rate of decline only two areas in the south end of the field would retain sufficient pressure for more than 20 years. In central and northern sections of the field, 42 wells were shown to have lost pressure at an average rate of about 200 pounds in the 11-month period; and unless conservation were enforced would in less than three years be unable to supply gas to Calgary on their own pressure. It is estimated that a pressure of at least 300 pounds is required to deliver gas to Calgary.

In Region No. 8, centering in Section 1-20-3w5, 20 wells in July, 1932, averaged 896 pounds, compared with 1,097 pounds average pressure in August, 1931. Five Royalite wells and five McLeod wells are included in this group. Farther north, in the McDougall-Segur and adjacent areas, 22 wells, including 9 of the Royalite producers, showed average pressure of 909 pounds and a drop in the 11-month period of 197 pounds. Model's No. 1 in Section 22-20-3w5 has not completed testing, and Foothills' No. 1 in Section 27-20-3w5 showed an increase of 20 pounds in pressure.

A more encouraging situation was shown in the newer areas of the south. In Region No. 2, centering in the Mercury tract, Section 4-19-2w5, and including the Sterling Pacific and two Southern Lowery wells, the average pressure was 1,534 pounds with a decrease of only 52 pounds. These wells, it was estimated, would continue to deliver for 23 years. Merland's No. 1 in Region No. 1 showed 1,815 pounds pressure, with 70 pounds decline in the 11 months. Region No. 3, with the East Crest, Homestead, Mayland and some other wells showed an average of 1,318 pounds and a decline of 145 pounds. Region No.4, centering in the Home tract, Section 20-19-2w5, showed 770 pounds pressure and a drop of 89 pounds. In Region No. 5, Advance Oil Co.'s No. 5-A dropped 255 pounds to 1,045; in Region No. 6, Mayland's No. 1 dropped 155 pounds to 1,005; and in Section 23-19-2w5, four wells, including Structure's No. 1, showed an average drop of 187 pounds with 1,210 pounds pressure at the last test.

Conservation board officials state that the conservation measures will check the decline in pressure. There is some difference of opinion as to whether Turner Valley consists of one or several fields; but if the latter is the case, it is regarded as possible to ultimately establish a uniform pressure throughout the entire field.

Tests in the Foothills

On the Fisher Creek structure, northwest of Turner Valley, Cotton Belt Mines' No. 1, LSD 4, Section 21-21-4w5, is drilling below 3,075 feet in a very hard formation.

On the Moose Mountain structure, farther north, Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is drilling new hole below 3,350 feet after completing water shut-off. The log indicates the Home sands, a potential light crude horizon, may be reached around 3,500 feet.

Steveville Test Spudded

In the Red Deer Valley, east of Calgary, Steveville Oil Co.'s No. 1, LSD 8, Section 4-22-12w4, spudded in last week. The wildcat is one of the most important undertaken recently in Alberta. The location is in the Alberta "bad lands," in an area of tall cliffs and wind-swept canyons, famous as a graveyard of prehistoric dinosaurs. Potential oil structures were first reported in the Steveville district by Doctor Dawson more than 30 years ago, and a lot of leasing was done at the time of the first Calgary boom in 1914. Preparations for a test were halted by the war. Further leasing was done three or four years ago by various interests, a syndicate of Bassano, Brooks, Hanna and Cessford men securing a large block. Vancouver interests, headed by W. D. Marler, arranged to develop these holdings and organized the present Steveville Oil Co. The location is on the bank of the Red Deer River about 300 yards west of Steveville. There is a well defined anticline and erosion has brought the potential oil formations within fairly easy reach. Gas is looked for at 600 feet and oil between 2,600 and 3,000 feet. Union Drilling Co. of Calgary is handling the test.

Keho Lake Resumes

In the Keho Lake district, northwest of Lethbridge, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, further cementing back has been done from 4,800 feet, preparatory to sidetracking lost tools. Completion of the test, which previously got a show of high grade crude in the top of the Madison lime at 4,920 feet, is under general supervision of A. M. Polen, district superintendent of the Continental Oil Co.

Red Coulee Well

In the Montana end of the Red Coulee Field, Askalta Oils' No. 6, NE SW NE Section 2-37-4w, is reported drilling below 2,190 feet and should get the oil sand early next week. The well, which already has 1,500,000 feet of gas, will be completed with 6-inch hole.

Montana Fields

In the Montana fields, Myers & Johnston of Calgary are planning a test on an 80-acre lease in N half SE Section 19-34n-1w. Location is on a previously untested high of the Kevin-Sunburst Field, about a quarter mile west of the Bethal-Adams gasser and three-quarters mile southeast of Medford Oil Co.'s oil pro-

ducers on the Morton lease. The intervening area, a mile square, is untested. On the Milk River anticline, Milk River Petroleum Co.'s Fulton well, E half Section 29-36n-12w, is reported drilling below 3,200 feet, with a top of the Madison lime estimated at 4,200 feet.

Kamorley Oils Venture

Kamorley Oils, Ltd., of Kamloops, British Columbia, organized some years ago to develop acreage in the Morley Indian Reserve, has optioned the Gold King group of claims in the Lillooet gold mining area of British Columbia and has contracted for diamond drilling tests. Kamorley's No. 1 was located on the Morley Reserve several years ago, but never got to the drilling stage.

Sage Creek District

In the Sage Creek district, British Columbia, Crow's Nest-Glacier Oil Co.'s No. 1 is reported making new hole after underreaming from 2,964 to 3,160 feet. The drill is still in the limestone. The area is an interesting prospect in view of gas and light crude showings already encountered and the somewhat unusual geological condition existing this close to the mountains. A recent report by Geologist Victor Dolmage summarizes conditions as follows:

"Oil and gas seepages or exceptional activity have been known in Sage Creek Valley for many years and several unsuccessful attempts made to drill the field. The geology of the region, while similar in a number of respects to other oil fields, has, however, some unique features which make predictions more than ordinarily difficult. The seepages are active and yield sufficient gas and high grade crude oil to indicate a probability that an accumulation of commercial dimensions may occur at depth.

"The structure appears to consist of a domed anticline, which is the most common and favorable type of oil structure, and it is significant that the known seepages occur on or close to the crest of the structure. The rocks which form the structure, however, consist of exceedingly fine-grained sediments, mostly shales and limestone, which contain no fossils and are of great age, probably pre-Cambrian. They contain no beds from which the oil could have been produced and none which, in a natural condition, is porous enough to form an oil reservoir. They would, however, where not too badly faulted, form excellent cap rocks and the brittle limestones, if sufficiently fractured, might form good reservoirs, as they have been known to do in other fields.

"The great age and consequent absence of organic material from this formation lead to the conclusion that the oil originates in younger formations which lie beneath these older formations. Such conditions could only be brought about by overthrust faulting, and from this it is concluded that the Sage Creek structure very probably rests on top of the great Lewis overthrust fault which extends for many hundreds of miles along the eastern margin of the Rocky Mountains and has a throw in places of at least 8 miles and probably more.

"Beneath this fault lie great thicknesses of younger strata ranging in age from early Palaeozoic to late Mesozoic. The oil undoubtedly originates in one or more of these formations, and judging from the character of the oil and from a knowledge of adjacent oil fields, the most likely one is the Fernie shale. This formation outcrops in the Flathead Valley, a few miles to the west, and is thought to be the source of most of the oil in the Alberta fields.

"It is evident from the above facts that the most probable place of finding a commercial flow of oil is at or near the depth of this great fault where the crushed and broken rocks would have sufficient porosity to form a reservoir."

According to Mr. Dolmage, this horizon may be met at no very great depth below the bottom of Crow's Nest-Glacier's present test.

Drilling in Ontario

In the north end of the D'Clute Field, Kent County, Ontario, Union Gas Co.'s No. 21, Lot 22, Concession 10, Raleigh Township, has finished at 1,833 feet, getting the bottom of the lime. It is a small gasser and will be shot. The location is southeast of the Olga Oil & Gas Co. producers and north of Union's No. 20.

In the Dawn Field, Lambton County, Union Gas Co.'s No. 62 is reported drilling below 1,775 feet without a show. Union's No. 63, also in the west end of the field, is rigging up.

In the southwestern section of Lambton County, Black Bear Syndicate's No. 1, NW half Lot 15, Concession 13, Sombra Township, has spudded in and is drilling below 90 feet. The location is on the creek bank, and the top of the lime is looked for at around 700 feet.

In Euphemia Township, Vogal Syndicate's No. 2, NE Lot 20, Concession 10, is reported still standing. The test was dry in the lime, but there is a chance it may be drilled deeper.

Most Important Wildcat in Western Mich.; Oceana County Well Flows 950 Barrels

By PAUL A. ELLIOTT

MUSKEGON, Mich., July 30.—Edward Duvall's No. 1 well on the Oscar Weirich lease in Section 32, Elbridge Township, Oceana County, flowed about 25 bbls. in the first 45 minutes as the most important new wildcat oil development in western Michigan in about two years.

The well, located on M-82 about 7 miles east of Hart, tapped the upper Traverse limestone pay sand at 1,912 feet and was shut in. It was cracked open for less than an hour today and allowed to flow into a 100-bbl. tank. It had been drilled less than a foot into the pay sand when it filled the 8-inch hole with about 950 bbls. of oil in the first 24 hours. Considerable gas was struck with the oil. Lack of tankage made it impossible to make a longer test.

Two other wildcat wells are to be drilled in other sections of Oceana County. Johnson Oil Refining Co. is preparing to drill a well several miles east of the Duvall wildcat.

The Reed Oil Co., of Muskegon, holds about 1,200 acres of leases within 2 miles of the newly discovered well including one 300-foot offset.

Five completions were reported in the Central Michigan Fields, three being producers with initial production of 500 bbls., and two dry holes. The best of the three oil wells was drilled by John Arthur, Inc., No. 2 well, 530 feet from the south line and 900 feet from the east line of the Julius and Caroline Schug farm, SW SE SW Section 22, Vernon Township, Isabella County, with an initial production of 300 bbls. In Gilmore Township, same county, Frank L. Maire and others of Lima, Ohio, drilled No. 1 well, 650 feet from the north line and 330 feet from the east line of the Earl T. Wilson estate, NE SE NE Section 12, and it is reported a dry hole at a depth of 4,129 feet. Deerfield-Nottawa Oil & Gas Co.'s No. 1 on the Smith farm, SW SE NE Section 35, Nottawa Township, same county, has been plugged as a dry hole, as deeper drilling failed to find commercial production of either oil or gas.

In Midland County, Greendale Township, W. L. McClanahan, Inc.'s test in the southwest corner of the Schaffer farm, SW SW SW Section 12, is reported showing for 125 bbls. initial. Michigan Oil & Gas Corp.'s test in the southwest corner of the Ira Bond farm, SW SW NE Section 12, estimated for 75 bbls. initial, and in the same township, Michigan Pacific Oil & Gas Co.'s test in the northeast corner of the John Otway farm, NE SE NE Section 27, Porter Township, same county, is reported dry at 3,480 feet. W. Hunter Atha's test, 660 feet from the south and west lines of the Chemical State Savings Bank land, SW SE Section 21, Ingersoll Township, Midland County, that was dry in the Dundee formation, is drilling at last report at 4,630 feet, making a deep test of it.

Close to Dundee

Much interest is shown in the test being made by W. L. McClanahan in No. 1 well, 990 feet from the north line and 330 feet from the east line of the Roy Caywood farm, SE NE SE Section 36, Greendale Township, Midland County, as it is getting close to the Dundee formation. The next completion for the East Pool extension is Pure Oil Co.'s No. 2 well, in the southwest corner of the Paul D. Wampler farm, N half SE Section 9, which is now in the Dundee formation, and close to large producing wells. Same company's No. 2 in the southeast corner of the Edward O. Harris and others farm, SE NW Section 15, same township, is drilling below 3,000 feet and has been delayed by a fire but is now going along nicely and should reach the Dundee within a few days.

Jones-Woodruff's No. 2 on the Jones-Woodruff farm, NE SE NW Section 13, Greendale Township, has started drilling. W. L. McClanahan, Inc., is drilling No. 1 in the southwest corner of the Mac Spearbrocker farm, SW SW NW Section 13, same township.

Michigan-Pacific Oil & Gas Co. got a permit to drill in the northeast corner of the Charles S. Hoyt farm, NW NW NE Section 24, Jasper Township, Midland County, a purely wildcat venture. Mid-Bay Oil Co., on J. L. Hickey farm, E half W half NE Section 24, Midland Township, is shut down at 3,800 feet without a showing, excepting that was found in the Travers sand at 2,837 feet.

Showing in Macomb County

Following the shooting of a well on the Krantz farm, Cotton Road, near Jefferson Avenue, 6 miles north of Mount Clemens, oil was found. Although the oil showing is not believed to be of value, promoters believe they have discovered a field and will continue drilling operations. The well was shot at 2,535 feet when oil sand was struck. A heavy pressure of gas also came from the well before shooting. There was about 200 feet of oil in the well, according to reports made by H. H. Brown and others, drillers. This showing of oil is in Macomb County.

Exports of Petroleum and Its Products Show Decline in Value During June

By CHAS. E. KERN

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 1.—Exports of petroleum and products declined in value from June, 1931, when the amount was $21,293,203, to $19,890,082 in June, 1932, according to the monthly summary of foreign and domestic commerce prepared by the Bureau of Foreign and Domestic Relations.

Crude petroleum exports totaled 2,543,679 bbls. in June, 1931, increasing to 2,790,625 bbls. in the same month of the present year.

Canadian importation of crude from the United States declined from 1,900,899 bbls. to 1,737,810 bbls.

Natural gasoline exports totaled 92,311 bbls. valued at $211,405, against no exports of record for the previous June.

Refined oils exported dropped from 7,105,612 bbls. valued at $18,144,730 in June, 1931, to 6,353,494 bbls. valued at $15,960,420 in June of this year. For the six-month period ending with June, the decline in these exports was from 46,769,213 bbls. in 1931 to 40,052,134 bbls. in the six months of the present year.

Although the exports of gasoline during the first six-month period of this year showed a decline compared with 1931, there was an increase in the exports of this product in June compared with the same month of the previous year.

The decrease in the first six-month period was from 22,921,819 bbls. in 1931 to 20,393,829 bbls. in this year.

The month's increase in the exports of gasoline was from 3,093,230 bbls. in June, 1931, to 3,368,937 bbls. in June of this year. The United Kingdom decreased its taking of gasoline from 1,196,980 bbls. in June, 1931, to 986,483 bbls. in the same month of this year, while Canada increased its taking of this product from 219,992 bbls. in June, 1931, to 227,755 bbls. in the same month of this year.

Illuminating oil exports showed a great increase in quantity but a much lower price par barrel in the June record. The quantity exported was 720,339 bbls. valued at $2,263,968 in June, 1931, compared with 1,068,453 bbls. valued at $2,264,889 in June of the present year. For the six-month period these exports decreased from 6,019,100 bbls. to 5,384,818 bbls.

Gas oils and distillate fuel oil exports showed a great decline from 2,461,528 bbls. in June, 1931, to only 464,349 bbls. in June, 1932.

Fuel and bunker oil for vessels in foreign trade (not included in domestic exports) exported declined from 4,053,160 bbls. in June, 1931, to 3,704,466 bbls. in June of this year.

Lubricating oil exports declined from 821,353 bbls. in June, 1931, to 712,871 bbls. in June of this year.

Lubricating grease exports declined from 5,969,436 bbls. in June, 1931, to 4,947,885 bbls. in June of this year.

Exports of paraffin wax declined from 20,389,013 pounds in June, 1931, to 12,439,079 pounds in the same month of this year. Of these exports in the latter month 2,759,296 pounds were unrefined and 9,679,783 pounds were refined.

Exports of petroleum asphalt totaled 11,320 tons in June compared with 22,808 tons in June, 1931.

Petroleum coke exported in June totaled 8,754 tons compared with 9,432 tons in the previous June.

LEGAL

Notice of sale by trustee.—I will receive sealed bids at my office, 213½ W. Ferguson Street, Tyler, Texas, up to 10 o'clock A. M., Tuesday, August 9, 1932, for the sale of ten acres, known as R. G. McIntyre Drilling Company "B" Lease, on the M. L. Thompson farm, Cordova Survey, Rusk County, Texas. Said property will be sold subject to the balance due on oil payments originally aggregating $45,000.00, and payable out of 11/32 of 7/8ths of the oil, if, as, and when produced on said lease; and free of other liens and encumbrances. Sale to be made subject to approval and confirmation of the Referee, and subject to the right to reject any and all bids. Edw. F. Perry, Trustee of Estate of R. G. McIntyre Drilling Co., Bankrupt.

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Drilling Operations Increase in Central West Field; Unusually Good Well in Kentucky Pool

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Aug. 1.—A slight improvement is shown in the Central West Field, comprising the Lima, Central Ohio, Indiana, Illinois and Kentucky Fields, and indications are for an increase in drilling operations for the balance of the year.

In Wood County, in the old Lima Field, Carl W. Schwyn's No. 2 Trustee drilled in No. 26 on the George G. Zody farm, near Cygnet, in Section 6, Bloom Township, and found water. It was on this same lease that a 150-bbl. well was brought in last month, and the water well came in as a surprise. Numerous wells were abandoned in Wood County during the past few weeks. In Liberty Township the Ohio Oil Co. abandoned Nos. 8 and 9, Caleb Mercer farm, Section 12; No. 27 on the Amelia Spooner west 80 acres, same section, and Nos. 30, 44 and 45 on the D. J. Cory No. 3 farm, also in Section 12. In Henry Township the Ohio Oil Co. abandoned No. 16 James Madden farm, Section 13, and Murray B. Chidester abandoned No. 7 on the Julia C. Sargent farm, Section 34, Plain Township, not far from Bowling Green.

In Allen County, H. F. Kelly and others drilled a 1-bbl. pumper in No. 2 on the Irville Hanes farm, Section 19, Perry Township. C. A. and F. J. Peavy are drilling No. 6 C. A. Hoover farm, Section 24, Bath Township, same county.

In Auglaize County, Adrian Tester has a rig in for No. 3 on the Harry N. Hanold farm, Section 34, Moulton Township.

In Mercer County, Masters Oil Development Co.'s test on the Adam Hoening farm, Section 19, Gibson Township, is credited with an initial of 10 bbls., while in Granville Township, same county, Ben Post drilled a dry hole on his own farm, Section 21, and O. G. Sellers is drilling on the A. Rindler farm, Section 36, same township.

Unknown parties report the finding of gas near Kalida, in Putnam County. Ellerman Oil Co. is drilling on the Joseph H. Hurd farm, Section 25, Cynthian Township, Shelby County.

Bert Sheldon is drilling on the Ida Wederts farm, Section 30, Blanchard Township, Hardin County.

No completions were reported from either Seneca or Wyandot Counties, although several wells are nearing the pay sand. Some are drilling for shallow gas while others are after production from the Trenton limestone formation, the source of the big wells in the Lima Field in past years.

The completion of a 50-bbl. initial producer by the Independent Torpedo Co. in No. 5 on the Cains Henry farm, Section 14, Pleasants Township, Hancock County, may bring about additional development work in the Findlay area.

CENTRAL OHIO

The Central Ohio Field has been busy and may continue activity until the winter season opens, the hunt being more for gas than oil.

In Lorain County the Wiser Oil Co. has a light gas well on the A. P. Squires farm, Section 12, Carlisle Township, from 2,168-80 feet. McMillan and others are drilling No. 1 Sylvia Jackson farm, Section 15, same township, and starting a test on the Henry Schieldt farm, same section.

In the Chatham Field, Medina County, the Oko Oil & Gas Co. has been busy for the past few days bringing in some very nice shallow oil wells. This company's No. 33 Sanford-Watson farm, Section 10, Chatham Township, is reported good for 15 bbls. at a depth of 321 feet, and No. 34, same farm, is a 4-bbl. producer. This company's No. 17 L. A. Watson farm, Section 3, same township, produced 15 bbls. initial at from 282-331 feet; No. 18, same farm, 12 bbls. from 281-321 feet; No. 19, same farm, 15 bbls. from 280-340 feet. Edson Sons Co. drilled in a 12-bbl. producer in No. 27 on the A. W. Shaw farm, Section 4, same township, from 274-356 feet, and No. 4 on the Dave M. Geisinger farm, Section 9, with 10 bbls. initial from 325-45 feet.

In Holmes County the Reno Oil & Gas Co.'s test on the Carrie Pipes farm, Section 15, Richland Township, is reported with an initial of 32 bbls. from a depth of 3,148 feet, and in Washington Township, same county, Wiles and others have a gas well on the Catherine Spang farm, Section 27, in the Berea sand from 543-50 feet.

In Cuyahoga County, Strongville Township, Dillon & McFrederick report a 6-bbl. pumper in No. 2 J. & J. Peck farm, Section 31.

Fairfield County

In Fairfield County the City Natural Gas Works is drilling No. 3 on the Birdie Clump farm, Section 23, Pleasants Township, and Charles Blume and others are starting a test on the Francis E. Frye farm, Section 26, Rush Creek Township.

In Summitt County, Barnhart and others are drilling on the Hillside Country Club property, Section 4, Richfield Township.

In Licking County, Fallsburg Township, Emerald Petroleum Co. is drilling No. 3 Arta M. Cochran farm, Section 10. Blue Rock Oil & Gas Co. is drilling No. 3 on the W. D. Booth farm, Section 14, and Williams and others are starting No. 2 Ed A. Divan farm, Section 23, same township. Wehrle Gas Co. is drilling on the Wehrle and others property, Lot 3, Hopewell Township, same county. Atha Oil Co. made a location for No. 3 L. M. Bryan farm, Section 3, Perry Township.

In Muskingum County, Brush Creek Township, Ohio Fuel Gas Co. has a gas well in No. 1-5,550 on the Carrie Staker farm, Section 3.

In Athens County, Watkins and Jones are drilling on the N. S. VanVorhees farm, Section 20, Alexander Township. I. C. Robinson is drilling No. 4 Amy J. Lucas and others farm, Section 16, Rome Township, same county.

In Stark County, F. A. Brendall and others found a good gas well in No. 8 on and Lake Cable land, Section 23, Jackson Township, in the Clinton lime from

(Continued on Next Page)

Another Test Started in Scott County, Va.; Somerset County, Pennsylvania, Test Dry

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Aug. 1.—In a notice to all producers with whom they have contracts for all oil as run, the South Penn Oil Co. advised that the allowable production for the month of August will be the same as that set for the month of July or 75 per cent of the November, 1931, runs. This order affects about 90 per cent of the oil run in the lines of the Buckeye Pipe Line in southeast Ohio, the Eureka Pipe Line Co. in West Virginia and the South West Penna Pipe Lines in southwest Pennsylvania.

Explaining the curtailment, the South Penn Oil Co. states in part: "Our company has notice that its outlet for Penncylvania crude oil throughout the month of August will be the same as through the month of July. Therefore, we must again ask that all our customers continue their curtailment of production throughout August in keeping with the curtailment asked for the month of July.

"We trust you will appreciate that we are doing everything we can to expand the outlet for Pennsylvania crude and that you will help us in this effort to effect an orderly curtailment of production until such a time as the demand returns to normal."

Somerset County Test Dry

The American Natural Gas Co. continued its operations in Quemahoning Township, Somerset County, southwest Pennsylvania, with a test on the Richard Lohr farm east of the dry hole on the Royal Rhodes farm, near Ralphton. It was drilled through the Injun sand and to a depth of 1,600 feet and the hole was abandoned. This test was not scheduled for the deeper sand which has been productive in two tests and which is found at about 2,550 feet but was drilled to test the Injun in which some gas had been found in the Rhodes test, but not in commercial quantities.

Additional geological work is being carried on by the operators in this section and an additional location will be made for another test, closer to the region of the two producers which have a total potential of about 2,000,000 feet.

VIRGINIA

The lower section of West Virginia and Virginia are being tested in various formations and on structures which, though local, are of considerable size. A forerunner of this drilling was in a Virginia State Geological report of the oil and gas possibilities at Early Grove, Scott County, Virginia, published by the state geologist, Charles Butts. In the latter part of 1931, Davis Elkins and others drilled a test on the Smith farm in that county, about 15 miles east of Gate City. Gas was struck at 2,900 feet and gauged 1,057,000 feet a day with an initial rock pressure of 1,600 pounds. There was no sand but the gas was found in shale, bottomed in a crevice. These operators have started a second test which is now 3,500 feet deep and it is heavy rigged for deep drilling. The first test went to a depth of about 4,500 feet, and the second test may be drilled to 6,000 feet.

In Buchanan County, Elkins and others have a test drilling on the Smith farm in that locality which has reached 4,815 feet. In Wise County the Benedum & Trees test on the J. Kaufman farm has reached 1,010 feet, and in Russell County their test on the Clinchfield Coal Co. tract is now around 400 feet. In Washington County, Beahm & Co. have shut down their test on the J. M. Arnold farm at 2,440 feet, testing the casing, which may be letting water into the hole.

West Virginia Wildcats

About a mile west of Kearns, in Randolph County, West Virginia, William Snee and others are drilling a deep test which has reached 4,200 feet. The Oriskany sand was found unproductive and about 115 feet thick at this point. It is reported that the Allegany Gas Co., which had such success in the Tioga fields, has acquired a half interest in this venture.

In McDowell County the Benedum & Trees test on the Pocohontas Coal Co. tract is progressing rapidly and has reached 2,730 feet.

Three producers, with an initial production of 21 bbls., three gas wells and three dry holes comprised the total new work in the three division of the lower Eastern fields. One of the gas wells was a fair test. All of the producers were in Southeast Ohio.

SOUTHEAST OHIO

The best producer for the week was No. 5 of the Capital Drilling Co., Inc., on the Little and Swigert lease in Lot 32, Washington Township, Tuscarawas County. It was drilled in the Niagara lime at a depth of 3,748½ feet and produced 18 bbls. the first day natural. The top of the sand was 3,737½ feet and drilling stopped at the depth mentioned. This well has not been shot.

In Jefferson County the Ekey Oil Co. drilled a test on the Albert B. Ekey farm in the NW of Section 23, Island Creek Township. It is a Berea sand well at 1,250 feet and will be a small pumper, after shot. It is near the new wells on the Mills and Blackburn farm in the same section.

In Vinton County the Co-operative Oil Co. completed a test on its lease mapped as the Lucinda Martin farm, near Bollins Mills. Section 3, Knox Township. It was drilled in the Berea grit to a depth of 1,276 feet and is showing for a 2-bbl. pumper after shot. In Medina County the Oko Oil & Gas Co. drilled No. 35 on the Sanford and Watson lease in Section 10, Chatham Township. It was drilled in the Berea grit to 332 feet and was dry and faulted in that location.

WEST VIRGINIA

In the settled production areas, very little new drilling has been done in West Virginia since curtailment has been in effect and where a new producer is brought in, the result is not new drilling but a cleaning out of old wells to permit free production from the same formation. Thus in DeKalb district, Gil-

mer County, the Hope Construction & Refining Co. shot its No. 7 on the R. L. Weaver farm and after cleaning out increased the production from 4 to 8 bbls. a day. In the same district, South Penn Oil Co. did the same with its No. 2 on the C. W. Goff farm and increased its production from 5 to 10 bbls. a day. No new producers were reported during the past week.

Gas Wells

In Cabell County the Merritts Creek Gas Co. drilled its test on the Ohio River Land Co. tract, in Barboursville district, deeper to 3,119 feet, the Berea sand. Though a fair producer in a shallower formation, gas volume was increased and it is now rated at close to 1,000,000 feet a day from the longer lived sand.

In Ritchie County there were two completions. On the waters of Hughes River, in Grant district, H. L. Flanagan & Co. completed a test on the L. E. Kiger farm. This test found about 750,000 feet of gas in the Injun sand and then drilled on down through the Squaw sand. The Squaw sand was completely dry, and the well was completed in the Injun. In Clay district, Pritchard and Collins drilled a test on the W. H. and D. M. Bradford farm to a depth of 2,330 feet and in the Injun sand. It is a very light gas well in that formation.

Drilling in West Virginia

In Boone County the Pure Oil Co. has started drilling No. 58 on the Federal Coal Co. tract in Sherman district. Its No. 258 on the Williams Coal Co. lease has reached 1,765 feet. In Scott district the Cambridge Gas Co.'s test on the C. C. Lewis heirs farm is shut down at 1,750 feet for casing.

In Cabell County the Standard Ultramarine Co. has its test on its own property in Guyandotte district about due. Drilling has been suspended and the shot will be run at a depth of 2,975 feet. In the same district, C. C. Wolfe is ready with his test of the J. F. Weatherington farm and is down for tubing. The same operator has his No. 4 on the Ben Lomond Land Co. tract drilling at 1,930 feet and is rigging up on the T. H. Freeman farm. In this section the Guyan Valley Gas Co. has made a location on the Chesapeake Ohio Railroad Co. property. In McComas district the Empire State Gas Co. has made a location on the C. C. McCoy farm. In Barboursville district the Merritts Creek Gas Co. has started rigging up for its second test on the Ohio River Land Co. lease, following a successful test.

In Mingo County the Virginian Gasoline & Oil Corp. has started No. 24 on the Henry Closterman estate in Harvey district, and it is drilling at a few hundred feet deep. This is the first operation in this county for several months.

In Pleasants County, L. C. White & Co. are drilling a second test on the State farm in Union district. In Grant district, Hammett and Holpp have a test drilling on the W. H. Hammett farm which has reached 1,350 feet. In the same district the Riverside Oil Co. is drilling on the W. P. McTaggart farm and is down 1,690 feet. In McKim district, T. L. Shop reached 400 feet on the Jacob Cox farm and shut down with the test in litigation.

In Wirt County, L. E. Shuck and others abandoned their No. 10 on the W. H. Wheaton farm in Burning Springs district after reaching 675 feet. In Clay district, Baker and Brian are drilling on the D. P. Higgins farm and have reached 300 feet. In the same district, H. O. Davis is on top of the sand in his No. 16 on the George S. Lemon farm.

SOUTHWEST PENNSYLVANIA

No completions were recorded in Southwest Pennsylvania, and in addition to the dry test in Somerset County, there was but one other operation, and that was also a dry hole. It was No. 6 of J. L. Garard & Co. on the J. L. Garard farm No. 3 in Greene Township, Greene County, which found the Dunkard sand dry.

In Amwell Township, Washington County, the Union Gasoline & Oil Co. is continuing to swab its test on the Mary B. Lindley farm, and it is making a fair amount of oil each day. In South Franklin Township the Carnegie Natural Gas Co. is about due in the sand with its test on the F. Dickerson farm which is drilling at 2,600 feet.

In Allegany County, O. Miller has started two operations, a rig now standing on the Samuel Noving farm, and a test drilling at 1,400 feet on the P. J. Schrum farm, both in McCandless Township. In Beaver County, R. B. Abrams has a second test drilling on the John Montgomery farm in Greene Township. It is 300 feet deep.

Central West Fields

(Continued from Preceding Page)

4,354-66 feet. Nichter and others are drilling on the H. Schriner farm, Section 18, Plain Township, same county.

In Belmont County, Union Township, O. K. Oil & Gas Co. found a dry hole on the Paluga-Lynn farm, Section 34, at 3,789 feet.

In Guernsey County, Cambridge Township, a dry hole is reported by the Ohio Fuel Gas Co. in No. 2-5,662 on the L. N. Lafollette farm, Lot 9. Quillan and others are starting a test on the Elmer E. Hamilton farm, Section 10, Wheeling Township, same county.

INDIANA

No completions were reported from the Indiana Field, but there are several wells due for completion in the extreme southern part of the State in Perry and Spencer Counties, just north of the Ohio River.

ILLINOIS

Three completions were reported from the Illinois Fields, the best of which is W. C. McBride, Inc.'s test on the M. A. Magill farm, Section 34, Montgomery Township, Crawford County, which produced an initial of 15 bbls. H. R. Edeburn's No. 10 on the A. E. Joseph farm, Section 23, Prairie Township, same county, produced only 1 bbl. initial. Frank Allison and others are drilling on the A. E. Weartsbaugh farm, Section 19, Martin Township, same county.

In Edgar County, W. D. McCpin's test, 200 feet from the south line and 400 feet from the west line of the J. B. Weiland farm, NW Section 32, Embarrass Township, was dry at 285 feet.

KENTUCKY

An unusually good oil producer has been found by Goldberg and others in No. 4 on the Roy Owens farm in the Barrett Hill Pool, in the northwestern part of Ohio County, the initial production said to be 500 bbls., at a depth of 1,040 feet. No. 3, same farm, is also reported around 150 bbls. The Barrett Hill Pool is in Ohio County and in the northeastern part of McLean County and wells on the Ohio County side appear to be larger producers than on the McLean County side, and somewhat deeper than the development in McLean County toward Calhoun, the county seat of McLean County. No. 5 is reported under way for Goldberg and others on the Roy Owens farm on the Ohio County side.

In Daviess County, Ellis and Ashby's No. 2 on the E. R. Cooper farm, in the Jones Pool, is rated with an initial of 55 bbls. Brenner and Adams drilled a dry hole in No. 7 in the northeast corner of the Albert Jackson farm, in the Cane Run Pool, at a depth of 610 feet. Frank Fox and others' No. 6 well, 150 feet from the north line and 1,510 feet from the east line of the Charles Bell farm, in the Jones Pool, produced 30 bbls. initially from a depth of 654 feet. No. 7 well, 150 feet from the north line and 1,860 feet from the east line of the same farm, produced 30 bbls. from a depth of 652 feet. Same parties' No. 1 test in the southeast corner of the Cass Cook farm, also in the Jones Pool, produced 15 bbls. initial at 672 feet.

In Hancock County, Hupp, Duff and others' No. 5 on the J. W. Crowe farm in the Pellville Field is reported with an initial of 52 bbls., while Ira Huff's No. 2 Buck Parrett farm is reported with an initial of 35 bbls.

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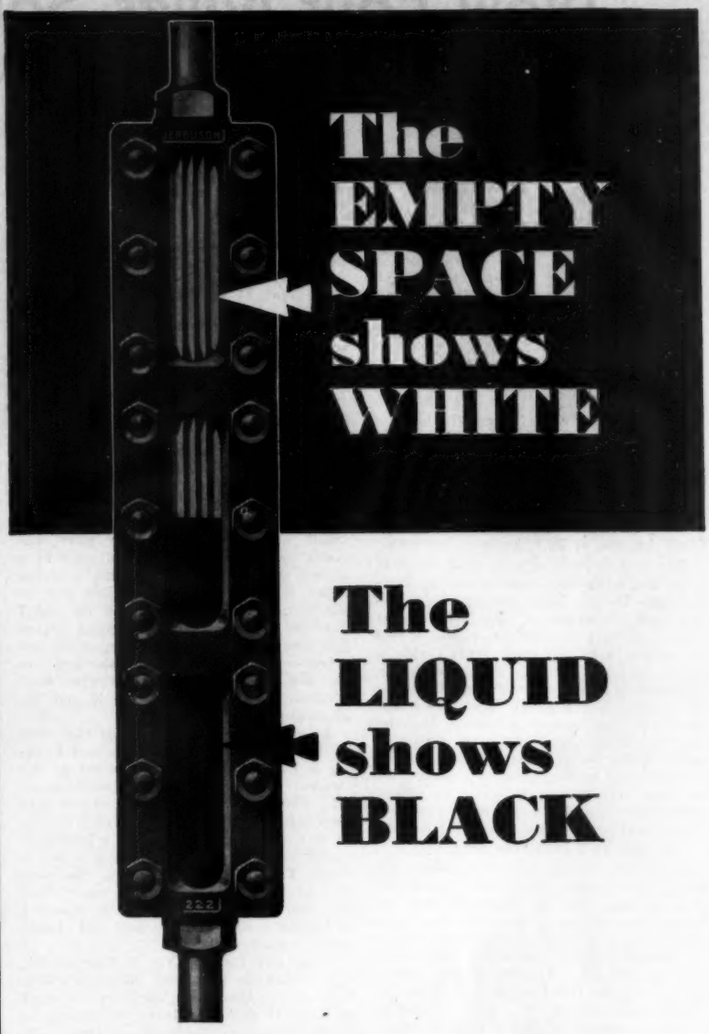

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Producing Area of Conroe Field Extended Mile, Now Four Miles Southwest to Northeast

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Aug. 1.—Extension of the producing area of the Conroe Field, central Montgomery County, approximately a mile to the southwest has been proved by the completion of Heep Oil Corp.'s No. 1 Hamman, Charles Stewart Survey, as a good producer. The well came in Saturday night and in the first 24 hours flowed 979 bbls. of pipe line oil through a 1¾-inch choke.

Pressure of the well is 750 pounds on the tubing and 750 pounds on the casing with 15 pounds on the separator. Gravity of the oil is 41.1 degrees at a temperature of 87 degrees, or 38.8 degrees, corrected.

The well is in sand at a total depth of 5,129 feet with the following setting from bottom: 18-inch back pressure valve, 23 feet and 7 inches of 5⅛-inch (O.D.) screen, 61 feet of 5⅛-inch blank, 8 feet of packer with 2⅞-inch (O.D.) tubing set 90 feet off bottom. The sand is approximately 100 feet lower than in Strake Oil Corp.'s No. 2 South Texas Development Co., the nearest producer, but the depth is in line with the sand depths in other wells so far completed. As the Hockleyensis marker had been picked up comparatively low in this test at minus 3,900 feet very little had been expected of the well until it found a good section of the sand at a favorable level.

Production in this well now proves the field over 4 miles long from southwest to northeast, with the Hamman well on the extreme southwest and the same company's No. 1 Freeman, John Davis Survey, on the extreme northeast. The latter well, located over 3 miles to the northeast of Strake Oil Corp.'s No. 2 South Texas Development Co., was completed at a total depth of 5,121 feet as compared with 5,129 feet in the Hamman well. The Strake well so far is the highest well in the field, being between the Freeman and Hamman wells almost on a line.

Best Well

The Conroe Field got a big boost late in the week with the completion of Alpha Oil Co.'s No. 1 South Texas Development Co., center of Block 47, southeast Alex McCown Survey, flowing at the rate of 118 bbls. hourly. This is the largest and best of the five wells brought in in the field to date. Sand in this is at a total depth of 5,158 feet, where the following setting from bottom was made: 18 inches back pressure valve, 31¾ feet of 4¾-inch (O.D.) screen, 56 feet 10 inches of blank pipe and 6 feet of packer with 2½-inch tubing set at 5,131 feet on top the sand. Production was through a three-eighths inch choke with pressure of approximately 750 pounds on tubing.

In 24 hours ending at 7 a. m. Monday this well flowed 330 bbls. of pipe line oil pinched to a four-sixty-fourths-inch choke with a casing pressure of 200 pounds. Operators are rushing construction of a 5,000-bbl. tank to store the production until construction from Conroe to a point near Spring on its trunk system from North Texas to the coast.

The Alpha well is about a half mile to the northeast of G. W. Strake's No. 1 South Texas Development Co., discovery well, and nearly on a line with it and Heep Oil Corp.'s No. 1 Cartwright, about three-quarters of a mile farther northeast in the John Davis Survey. The latter was completed the week before as a producer in sand at 5,165-86 feet after being deepened from sand at 5,078 feet where it formerly had been brought in as a wet gas well, the second well in the field. The discovery well still is a wet gas well, not having been deepened, so far, from the shallower gas horizon at a total depth of 4,991 feet.

Limit to North

Further limiting of development to the north of the present activity in the Conroe district is indicated by a drill stem test in Rowe & Flowers' No. 1 Alexander, southeast corner of the northernmost Alex McCown Survey and a little over a mile to the north of the Strake discovery well, which test was a little disappointing. The test was made in a sand and shale at a total depth of 5,119 feet and in 23 minutes it showed only a small amount of gas. The pipe was pulled two joints and opened, and in a second test the well blew three minutes. After this the pipe was pulled and at the bottom was 10 fourbles of oil and 7 fourbles of salt water. At latest report the hole was being cored deeper for another test. The way this hole has run has indicated the existence of some kind of faulted condition between it and the producing wells to the south.

Another well was due in at the close of the week, this being Gulf Coast Drilling & Production Co.'s (Plummer & McDaniel) No. 1 South Texas Development Co., Theodore Slade Survey, which has been standing cemented on sand at 5,132-49 feet. Although only about a half mile to the west of Strake Oil Corp.'s No. 2 South Texas Development Co., the high well of the field, it has run more than 100 feet lower. However, it is reported as having a good sand section and should make a good well.

Heep Oil Corp.'s No. 2 Cartwright, west offset to the same company's No. 1 Freeman, also has picked up the sand at 5,127-41 feet and is to set casing to depth. This company's No. 1 Brent, D. W. Collins Survey, northeast of the field, and which failed to find the pay after drilling to a total depth of 5,254 feet in salt water sand, has been plugged to 5,010 feet and is standing cemented with 7-inch casing at 4,970 feet to test the 5,000-foot gas sand. In a drill stem test of this several weeks ago at 4,977-90 feet it showed 600 pounds pressure.

Hardin County

In the salt dome district of the Gulf Coast, Houston Oil Co. and Republic Production Co.'s No. 1 Ariola fee, Ariola Survey, eastern Hardin County, is in a sandy shale showing oil at 2,315-25 feet. This is a wildcat, the first drilled on what is known as the Ariola geophysical salt dome prospect, and the finding of the oil sand and at comparatively shallow depth has created considerable interest. The prospect was discovered in 1928 by seismograph exploration.

Rabbs Ridge

The completion by The Texas Company of its No. 1 Wolters, Samuel Kennedy Survey, Fort Bend County, 1,800 feet north of production at Rabbs Ridge early the past week, is taking that field out of the noncompetitive operated fields by starting a little offset play. The Texas Company lease is a 100-acre tract, one of a strip of similar and smaller tracts adjoining to the north the jointly owned block held by Gulf Production Co. and Humble Oil & Refining Co., and on which, so far, all development has been confined. The latter operators already have started a due south offset to the Wolters well in their No. 3-A F. I. Booth, being 100 feet south of The Texas Company's line. The Texas Company is starting a second well on the same lease, it being No. 2 Wolters, 150 feet out of the southeast corner. No. 1 was 742 feet from the west line and 100 feet from the south line. Sun Oil Co., Shell Petroleum Corp., Humble Oil & Refining Co., individually, and other operators have acreage north of the Gulf-Humble joint block and in line for development as a result of The Texas Company discovery. Other offsets will have to be made in the near future.

The Wolters well, which came in flowing 1,000 bbls. daily through a half inch choke from sand at a total depth of 5,322 feet, in which 87 feet of 7-inch screen was set, proves Rabbs Ridge to be one of the largest fields in area on the Gulf Coast with the northern limits so far undefined.

Humble and Gulf's No. 4 Lockwood, Rabbs Ridge, which blew out and caught fire, swallowing derrick and rig in a 200-foot crater, burned itself out after five days and now has been abandoned. The gas and fire are believed to have been killed by walls of the crated caving in on the 4,520-foot sand, from which the well blew out. These companies' No. 2 Davis, Robert Peebles Survey, on the extreme south end of the field, has been completed flowing 10 bbls. hourly through a five-sixteenths-inch choke.

Other Completions

Completions, in addition to those mentioned, reported on the Gulf Coast the past week include Magnolia Petroleum Co.'s No. 4 Frieber & Wolf, Lockport, Calcasieu Parish, flowing 400 bbls., 35 per cent water, 3,392 feet; Yount Lee Oil Co.'s No. 28 Cade, High Island, Galveston County, 720 bbls., sand 5,543-5,615 feet; Yount Lee Oil Co.'s No. 29 Cade, High Island, 900 bbls., 5,275 feet; Sun Oil Co.'s No. 57 River, Humble, Harris County, 250 bbls., 1,318 feet; D. & L. Production Co.'s No. 1 Pevito-Hannah, Hull, Liberty County, 250 bbls., 4,687 feet; Republic Production Co.'s No. 146 Dolbear, Hull, 100 bbls., 2,507 feet. The Texas Company's No. 5 L. L. & E., Leesville, LaFourche Parish, Louisiana, is shut down waiting orders after going dead. This well was completed 10 days ago flowing 1,300 bbls. of pipe line oil from sand at 3,653-63 feet but failed to hold up.

Barbers Hill

At Barbers Hill, Chambers County, Rio Bravo Oil Co.'s No. 3 Fisher, William Bloodgood Survey, located on the west side of the dome, drilled through 389 feet of salt from 4,975 to 5,364 feet. This is the first time salt has been drilled through on this side of the dome. However, this test went back into anhydrite, in which the hole now is drilling at 5,423 feet, and so far has encountered no sedimentary formations below the salt. This test was located well inside and up on the dome on that flank in an effort to prove the existence of a salt overhang in that area. Production on that side of the dome already has been found in deep sands underlying a protrusion of cap rock but so far no salt overhang has been drilled through as has been done on most other sides of the dome to find prolific sands underlying. Finding of anhydrite below salt in this test is an unusual instance.

Locations were made for two new tests at Barbers Hill the past week, these being Texas Gulf Producing Co.'s No. 11-A Kirby, northwest flank, and Yount Lee Oil Co.'s No. 4-A Zadie Fisher, southwest flank. The latter is in a sector where several deep wells were drilled during 1930 and early 1931 but where there has been no drilling since. The Kirby test is located close up on the dome for the northwest side and is to be another attempt to drill through salt overhang there and find sands high up on the dome under the salt.

Black Bayou

Brownie Babbett Oil Co. has junked and abandoned its No. 1 Moore, a deep test at Black Bayou, Cameron Parish, Louisiana. The bottom of the hole was in a sandy shale showing oil at 6,619-22 feet but in going in to drill plug the drill stem twisted off and operators were unable to fish it out.

Gulf Coast Fields and Wildcats

Week Ending July 30

RACCOON BEND—AUSTIN COUNTY

Company, farm and location—	Remarks:
Grant & Baker's No. 1 Chesley, W. C. White Sur., 150 ft. from NW line and 150 ft. from SW line of 26-acre tract	Sandy shale 3,043 ft.; S.D.

WEST COLUMBIA—BRAZORIA COUNTY

Hogg et al's No. 1 Hogg, Martin Varner Sur., 1,250 ft. N and 125 ft. E of Sw cor. of Gulf, W. C. Hogg 200 ac.	T.D. 4,840 ft. in water sand; plugged to 3,200 ft.; drilled to 3,650 ft.; abnd.

BARBERS HILL—CHAMBERS COUNTY

R. E. Ferrell's No. 2 Wilburn, Henry Griffith League, 215 ft. W of No. 1 in center of 45-acre tract	T.D. 3,000 ft. in shale; fishing.
Humble Oil & Ref. Co.'s No. 1 Kirby, Henry Griffith League, 520 ft. N along E line from SE cor. of tract, thence 75 ft. W at right angles, thence 75 ft. N at right angles	Location.
Mills Bennett Prod. Co.'s No. 1-B Barber (W.O.), Henry Griffith League	T.D. 5,320 ft.; plugging to 5,015 ft.; to sidetrack.
Mills Bennett Prod. Co.'s No. 4-A E. W. Barber, Henry Griffith League, 300 ft. W of No. 3-A, 50 ft. N of S line	Drlg. shale and lime 4,772 ft.
Mills Bennett Prod. Co.'s No. 2 Kirby, Henry Griffith League, 645 ft. E. 40 ft. S. NW cor. of tract	Sand showing oil 4,379-4,409 ft.; setting screen to test.
McAlbert Oil Co.'s No. 4 Wilburn (D.D.), Henry Griffith League	Cutting and pulling screen to deepen 4,451 ft.
Rio Bravo Oil Co.'s No. 3 Fisher, Wm. Bloodgood Sur., 300 ft. E and 33 ft. S of NW cor. of tract	Drlg. anhydrite 5,423 ft.; salt 4,975-5,364 ft.

(Continued on Page 65)

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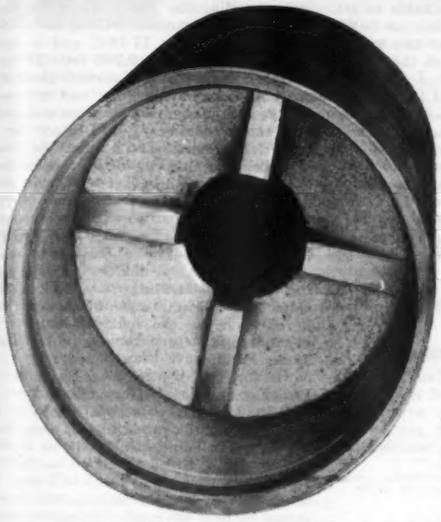

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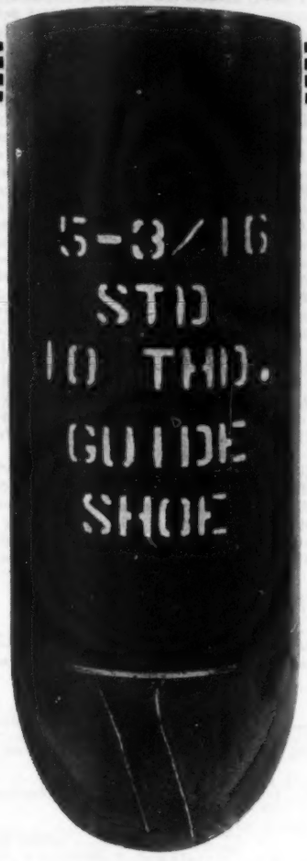

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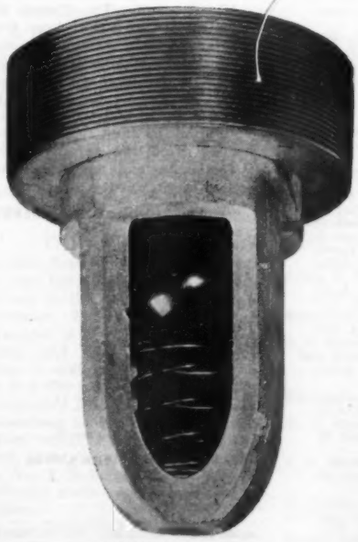

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GUIDE.

Eleven New Locations in Zwolle Area, Louisiana; Alabama Wildcats Making Good Progress

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Aug. 1.—The wildcat tests in this division did not develop anything of interest during the past week and the dry holes reported from wildcat territory were anticipated, having been inactive and temporarily abandoned for some time. Most of the completions were from the Zwolle Field in Sabine Parish, which reported four oil wells and three dry holes. Only one of the Zwolle completions added new territory to the producing area. J. H. Reeves' No. 1 Sabine State Bank, Section 28-8-11, was completed as a 25-bbl. pumper from 2,575 feet and extended production on the eastern flank of the field about 1 mile north. This will probably stimulate activity to the north of the east field, which area has had little or no play recently, most of the activity being east and southeast of the original extension in Section 1-7-11. The best well of the week was the Loring Oil Co.'s No. 1 Martinez, Section 3-7-13, gauging a flow of 700 bbls. daily from 2,066 feet. In the same section, one-quarter mile east of the Loring well, the Dengail Oil Co.'s No. 1-G Nulton was completed pumping 75 bbls. daily from 2,419 feet. On the eastern flank in Section 13-7-11, Craig and others' No. 1 Travis was put on the beam pumping 80 bbls. daily from 2,580 feet. This well was a slight extension to the east in that immediate vicinity. Two of the dry holes in the Zwolle area were within the proven lines and one was a semiwildcat northeast of production on the east. W. F. Lacey's No. 1 Hughes, Section 11-7-11, was dry and abandoned at 2,621 feet and the same operator's No. 2 Hughes in the same section was a duster at 2,552 feet. A. F. Tarver's No. 1 R. Stoker, Section 34-8-10, topped the marl at 2,823 feet and failed to hit a producing crevice in the chalk and was abandoned at 3,250 feet.

In the Rankin County area of the Jackson Field in Mississippi, James Alexander's No. 1 Holmes, Section 31-6n-2e, was dry and abandoned at 2,539 feet. The chalk was topped at 2,537 feet. The test was 1½ miles north of gas production on the east side of Pearl River, and about 1 mile east of northern production in Hinds County on the western side of the river.

Wildcat Failures

The two wildcat failures were both from Shelby County, East Texas. The General Minerals Corp.'s (formerly Chapperal Oil Co.) No. 2 Holt, Matthew Moore Survey, tested salt water and was abandoned at 4,017 feet. The dry hole was the third test in this immediate vicinity. The first one, drilled about three years ago, had a fairly good show of gas with some oil, and the second test was junked below 3,000 feet and skidded over on the present test. The other dry hole in this county has been standing temporarily abandoned for several months. McRoby and others' No. 1 Windham, William Leach Survey, was dry at 3,398 feet. The test is reported to have topped the Nacatoch at 1,750 feet, top of the chalk at 1,930 feet, with the base of the chalk at 2,572 feet.

Sixteen new locations were reported from three states in this division during the past week, 11 of them being in the Zwolle area. One new wildcat location was made in the northwestern part of Bossier Parish, Breazelle & Steckall's No. 1 Nattin in Section 15-22-14. The test is about 5 miles west of the town of Plain Dealing and between that point and the Hosston Field in Caddo Parish. A number of wells have been drilled in this vicinity during the past 15 years, resulting in good shows of oil around the 3,000-foot level.

Miller County Locations

Miller County, Arkansas, reports two new wildcat locations, making a total of four new operations for that area during the past two weeks. Litchfield and others are rigging up on their No. 1 Stone, Section 32-14-26, and Fred Pederson has staked a location for his No. 1 Fouke in Section 11-17-27. Fitzwater and others have recently started two new operations in the Miller County area, east of the city of Texarkana. Their No. 1 E. A. McCowan, Section 22-15-28, has a derrick pattern on location, and No. 1 C. J. Norsen, Section 20-15-27, is moving in rig. Two other operations are reported from widely separated districts in Arkansas. In the gas district of Franklin County, the Ozark Natural Gas Co. has made location for its No. 1 Monroe, Section 13-8-29, and in Cleburne County, Frank S. Craver and others are arranging to drill their No. 2 Doniphan Lumber Co. in Section 34-11-9. Other operations in Arkansas follow: Drew County, the Co-operative Development Co.'s No. 1 Ogles, Section 35-13-5, drilling in hard shale at 2,703 feet; Ouachita County, Fabry Creek Oil & Gas Co. (formerly Charles Steele and others), drilling at 475 feet; Union County, Cox and others' No. 1 Goodwin, Section 3-16-16, has spudded in and is drilling at 68 feet.

Mississippi Drilling

In Lamar County, Mississippi, Stauffer & Kouri are drilling in broken lime at 2,320 feet on their No. 1 Bond, Section 18-2n-14w. A drill stem test made at 2,312 feet developed 1,980 feet of salt water in 14 minutes without a show of oil or gas. Only two other wildcats are active in Mississippi. The Mississippi-Minnesota Oil Co.'s No. 1 Edwards Land Co., Section 23-6n-4w, in the western part of Hinds County, has been unable to get back to the bottom of the hole at 3,050 feet after being shut down for two weeks. In the north central part of the State, near the eastern border, P. J. McAlpin is drilling in sandy lime at 1,180 feet on his No. 1 Rye, Section 22-15s-17w.

The three Alabama wildcats are making good progress. The DeSoto Oil & Gas Corp. is drilling with cable tools in sandy lime at 2,772 feet on its No. 1 Gardner, Section 22-15s-16w. The deep test in Mobile County, the Ohio Oil Co.'s No. 1 Bethel, Section 34-3s-2w, set 9⅝-inch casing at 3,295 feet and is making hole at 3,800 feet. In the same county J. C. Prine's No. 1 M. & O. Railroad, Section 33-2n-4w, is drilling in blue shale at 1,950 feet.

North Louisiana Wildcats

Interest in North Louisiana wildcat territory, adjacent to some of the proven fields, continues although no new blocks were announced during the past week. Most of the blocks already assembled are in the process of curing titles before beginning operations. A wildcat in Beauregard Parish, the De Ridder Development Co.'s No. 1 McMahan, Section 33-2S-9w, made a drill stem test at 1,188 feet during the past week and developed a small show of gas. A previous well drilled in the vicinity is reported to have had a good oil sand at 1,202 feet, and the present test will be deepened to that level. The Petroleum Industries, Inc., Section 21-14-10, Red River Parish, topped the Nacatoch at 936 feet and is temporarily shut down at 1,026 feet. In Bienville Parish, between the towns of Gibsland and Arcadia, the Black Lake Development Co. has resumed drilling on its No. 1 Holston, Section 17-18-6, and is making hole in chalk at 2,393 feet. The anticipated show in the Nacatoch above the chalk did not materialize and the well will be deepened to the Blossom and probably the Woodbine. J. M. Bridges' No. 1 Joiner, Section 33-11-12, near the town of Pelican in DeSoto Parish, has reached the contract depth of 3,000 feet and shut down. It is not known at this writing whether or not the hole will be deepened. Another wildcat in DeSoto, Walters Nicholson's No. 1 Jim Guy, Section 3-11-13, is coring at 2,734 feet. Both of the Southland Drilling Co.'s wildcats, located on a 14,000-acre block, and believed to be on the southern flank of a shore line structure similar to the East Texas Field, have been temporarily shut down for two weeks. The Natchitoches Parish test, No. 1 Ross Olive, Section 10-9-10, has reached a total depth of 2,018 feet and the other test of this company on the same block, but in Sabine Parish, No. 1 Frost Lumber Co., Section 13-9-11, is shut down at 1,917 feet. It is understood that operations will be resumed on both wells after titles are cured on some of the leases.

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

BEAUREGARD PARISH

Company, well, farm name, section and block—	Remarks:
DeRidder Development Co.'s No. 1 McMahan, 158 ft. S, 160 ft. W NE cor. NW, Sec. 33-2s-9w	Coring 1,188 ft

BIENVILLE PARISH

Blacklake Dev. Co.'s No. 1 Holstow, 600 ft. W, 100 ft. S, NE cor. SE SE, Sec. 17-18-6	Drlg. chalk 2,393 ft.

BOSSIER PARISH

Breazelle & Steckoll's No. 1 Nattin, C SW NE, Sec. 15-22-14	Drlg. 56 ft.

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4	S.D. 3,712 ft.
Hudson et al's No. 1 Burton, Sec. 35-12-2e	S.D. 2,950 ft.

CATAHOULA PARISH

National Drlg. Co.'s No. 1 Marsh McMiller, 70 ft. N, 100 ft. W, C, Sec. 26-9-6	T.A. 3,097 ft.

CLAIBORNE PARISH

Leue Oil Co.'s No. 1 Kinder, Sec. 2-21-7	Rigging up on old well.
W. E. Rembert et al's No. 1 Hunt, 150 ft. N and E, SW cor. E half NE NE, Sec. 18-23-8	Rigged up and S.D.

DE SOTO PARISH

J. M. Bridges et al's No. 1 Joiner, 660 ft. S and E, NW cor., Sec. 33-11-12	S.D. 3,000 ft.
Coker et al's No. 1 Burns, 200 ft. N and W, SE cor. SW NW, Sec. 13-10-11	Set 10-in. 60 ft.
Donley & Chastain's No. 1 H. Smith, 325 ft. W, 600 ft. N, SE cor., Sec. 31-14-15	S.D. 2,470 ft.
S. A. Guy's No. 1 Dowling, 469 ft. E, 382 ft. S, NW cor. NE, Sec. 31-14-14	S.D. 2,970 ft.
E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-13-15	Coring 3,770 ft.
DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-13	Rigging up.
G. C. Smith et al's No. 1 Wollums, 330 ft. N and W, SE cor. Sec. 30-12-12	Set 10-in. at 101 ft.
Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13	Coring 2,734 ft.

GRANT PARISH

Security Pet. Corp.'s No. 1 Swope est., Sec. 16-9-1e, 1,698 ft. N, 220 ft. E, SW cor. Sec.	W.O.S.R. 1,585 ft.
O. Robichaux's No. 1 T. M. Bradford, 1,870 ft. E, 314 ft. S, NW cor., Sec. 16-9n-1e	Derrick.

MOREHOUSE PARISH

Feazel & Kalil's No. 1 Davenport, Sec. 28-21-6e	Rigging up.

NATCHITOCHES PARISH

W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec.	S.D. 2,010 ft.
Dr. H. S. Gerson's No. 1 Smith, Sec. 11-10-8, 2,000 ft. N, NE cor. of irregular Sec. 10, in Sec. 11	S.D. 1,375 ft.
R. A. Keaton's No. 1 Stephens, Sec. 35-10-4, 330 ft. N and W, SE cor. NW NW	S.D. 1,700 ft.
H. W. Perritt's No. 1 Cook, 165 ft. E, 165 ft. N, SW cor. NE SW, Sec. 3-8-9	S.D. 2,992 ft.

(Continued on Page 62)

Daily Average Runs

North Louisiana did not gain or lose in its daily average runs during the last week while Arkansas had a decrease of 15 bbls. daily. The Urbana Field in Arkansas has been shut down for two weeks, after recently reaching a daily production of from 700 to 800 bbls. The pipe line companies have not taken oil from this district for the past year, due to its low gravity, and the operators have been shipping by tank cars. The daily average runs from the several pools of North Louisiana and south Arkansas for the past week were:

NORTH LOUISIANA

	(Bbls.)
Caddo, light	5,045
Caddo, heavy	1,905
Cotton Valley	780
DeSoto-Red River	1,960
Elm Grove	360
Haynesville	4,096
Holly	265
Homer	2,890
Pleasant Hill	280
Sarepta-Carterville	900
Urania	3,620
Zwolle	7,820
Total	29,915
Total previous week	29,915

ARKANSAS

Champagnolle	1,800
El Dorado	3,110
Lisbon	485
Nevada	975
Smackover, light	2,900
Smackover, heavy	24,160
Stephens	710
Total	34,140
Total previous week	34,155
Difference	15
Total both states	64,055
Total previous week	64,070
Difference	15

Interest Shifts to Bee County, Southwest Texas; Two Completions in Government Wells

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Aug. 1.—Two completions in the Government Wells district, one at each end of the district, were reported during the week, and several other tests reached sand depth and were in process of completion. They are all pretty much inside propositions, however, and much of the interest of Southwest Texas shifted to Bee County, where development is starting around the Nichols well, which has opened a new field, and also some new activity in the Pettus and Cosden districts. The second well was also completed in the new Rosenberg Field in Webb County, and quite a lot of new trading in the Starr County district. F. M. Blair & Son are to make a test that may open up something new in Zapata County, a little east of the Escobas Pool, and in the Balcones Webster was in process of finishing up his No. 1-A McCrory and Bob Rose is still wrestling with his No. 1-B Walker. With a few exceptions the week closed with most of its operations just on the verge of doing something, but not quite finished.

Bee County

The industry is expecting to see considerable activity break out in Bee County in the new pool found at Tuleta, and it will probably be given the name Tuleta. Nichols' No. 1 Harris has been choked down. The volume dropped off a little from what it started with. It made 304 bbls. the first 12 hours but later dropped to about that much per day. It was choked down considerably more and Humble Pipe Line Co. made connections. Sand depth is 4,094-98 feet. H. H. Weinert of Seguin and C.R.&M. Drilling Co. of San Antonio own interests with C. F. Nichols of Beeville.

Coquat & Hawn of Three Rivers have moved in the first rig and are starting a test on the Harris tract about 1,000 feet southeast of the discovery well. Lonnie Glasscock made one of the first and quickest deals. For furnishing gas for fuel to drill the discovery well he got a 10-acre offset and he sold it immediately after the well came in for $10,000 of which half was paid in cash and half to be paid out of oil.

Pettus Field

In the older field of Pettus, The Texas Company and Slick-Seeligson have made new locations to the north of the Pettus west extension. The Texas Company's No. 6 Gremmel is 400 feet north of No. 5 Gremmell and Slick-Seeligson, Inc.'s No. 7 Ray is 400 feet north of No. 6 Ray, and is a 300-foot east offset to The Texas Company's No. 6 Gremmell. These tests are moving in the direction of the Cosden Pool which is less than half a mile north, but Coquat and Barnsdall Oil Co.'s No. 1 Roberts, a dry hole, is only 1,500 feet north of Slick-Seeligson's new location.

The Houston Oil Co. last week completed No. 4 Newman, about 750 feet east of nearest production in the Cosden Pool, and Coquat and Barnsdall Oil Co. are offsetting it on the south with No. 2 Roberts.

Another new development is Gulf Coast Oil Co.'s No. 3 Ray in the George Habbermacher Survey, 3 miles north of the east end of the Pettus Field, where a couple of producers were completed a few years ago but not followed up with development for production.

Government Wells

Magnolia Petroleum Co. completed No. 2 Johnson in the North Government Wells Field for an estimated 3,000 bbls. but pinched down to about 100 or 200 bbls. per day. It is classed as being one of the best wells in the field. It is a diagonal northeast offset to the Suttle discovery well.

In this end of the field there were several other tests being completed late in the week. Seacord & Putnam were completing No. 2 Johnson in the north end and four other tests were being completed in the south end. The Texas Company was bringing in two that offset producers and San Diego Oil Co. was bringing in two offsets to the same that The Texas Company offset.

Webb County

Rosenberg has made several locations for tests in the new field he opened in Webb County, 2 miles north of Oilton, and though trading is expected to be quite active in that territory only two others have started. Newton Oil Co. is drilling 2 miles north and F. M. Blair & Son are clearing location and moving in the center of NE NW of Survey 1100 about a half mile south of the discovery well.

Production from the Rosenberg well is being marketed to a local refinery by truck but arrangements are being made to lay 2 miles of line to Oilton and build a loading rack there and if, and as soon as, some additional production is developed it is understood other parties are arranging to lay a 5-inch line to Oilton, also.

There was a little delay completing the second producer in the field. There is also confusion as to the numbering of the tests. The second producer which probably should be called No. 4 Laurel is 600 feet south of the discovery well. They failed to get all the mud out and pulled tubing and cleaned and then ran the tubing back in and were to bring it in again through the tubing. While running tubing in again the packer gave trouble and the well started to flow in an incomplete stage and flowed at the rate of 250 bbls. a day through half-inch choke; which leads to the conclusion that after tubing and packer are properly set and the well is completed it will be a pretty good well. Depth is 2,244 feet.

No. 5 Laurel, located 300 feet west and 300 feet south of the discovery well and the same distance west and 300 feet north of new No. 4 Laurel, is down to sand with casing set and is due for completion.

New Deal in Zapata

F. M. Blair & Son's No. 1 Montemayor in Block 1 of Survey 63, about 1 mile east of the Escobas Pool, at around 1,700 feet is arranging to set casing. The first sand in the Escopas Pool is at 1,300 feet and the second at around 1,500 feet. Blair has a deeper sand which it is thought justifies setting casing to test.

Balcones Fault Zone

C. J. Webster Oil & Gas Co. is still working with No. 1-A McCrory that opened new crevice production in Caldwell County. It was deepened a little and took in 4 feet of crevice. It went into the crevice first at 2,083 feet and has been deepened to a total of 2,120 feet but the addition, other than the first 4 feet, was solid chalk. It has been cleaned out again and while the pressure is a little light it is a flowing well but the volume will not be known for a few days while they are experimenting with proper size of tubing to run.

In the new Dunlap Field northwest of the town of Luling, Smilock's (Townes & Porter) No. 1 Dunlap was shot with a light charge, cleaned out and brought in. It made a little gas and then went dead. Dickson & McDowell's No. 1 Walker, a mile northeast of the discovery well, was abandoned at 2,477 feet. Buchanan and others' No. 1 Nugent, a couple of locations south of the two producers of the field, has set casing at 2,156 feet where it topped the chalk, and Owen & Gunby's No. 1 Dunlap to the west of it has also set casing above the chalk. The only other test in the district is Bob Rose's No. 1-B Walker, which is working to knock out a bridge. It is a mile north of production and has considerable oil in the hole and looks like it might make a well.

In northern Lee County Paton Brothers are below 5,280 feet in No. 1-A Turner, but had not yet topped the chalk. This is to be an Edwards lime test to around 6,000 feet.

Starr County Active

While the deals were mostly small, there is a new activity in Starr County. Los Olmos Oil & Gas Co., which drilled the discovery well in the Los Olmos Pool, 8 miles northwest of Rio Grande City, started farming out some of its 3,000 acres. Hornaday & Porter bought 20 acres and will develop it; C. L. Sinclair, Tarver & Nance, C. M. Crafton, W. E. Hopper, each took tracts and will start development.

The Rio Grande City discovery well, Sioux Oil Co.'s No. 1 Goodrich, is now pumping an average of 80 bbls. a day of pipe line oil which is a little increase over what it was doing. The other three producers in that field are each pumping about 50 to 60 bbls. per day. Depth of these wells averages 1,450 feet.

A number of operators have tracts on the north following the trend of this pool and some additional tests that may greatly extend the field are due to be started within a short time.

The coast counties have been singularly quiet recently. Saxet has completed No. 2 Walton in the Saxet Field in Nueces County, a big gas well with 800 pounds on quarter-inch choke in sand at 2,565-71 feet and Atlantic Oil Producing Co. abandoned at 5,805 feet No. 4 Welder in San Patricio County.

Wildcat Operations in Southwest Texas

Week Ending July 29

ATASCOSA COUNTY

Company, farm and location—	Remarks:
American Central Oil Co.'s No. 2 Mary McConnell, 150 ft. W of E line, 300 ft. S of No. 1, Blk. 138, W. C. M. Baker Sur., 3 miles W and 6 miles S from Somerset	T.D. 1,660 ft.; standing.
Glen Mathis' No. 2 Mrs. C. Martin, 100 ft. SE of No. 1.	T.D. 2,980 ft.; standing.

BANDERA COUNTY

F. A. Brown's No. 1 R. B. Watson, 600 ft. N of cen. of S line of Sec. 71	T.D. 70 ft.; drlg.

BEE COUNTY

Fitzgerald & Pryer's No. 1 Albert Johnson in M. Alcorle Sur.	Location.
Howell & O'Neal's No. 1 King ranch, 660 ft. from N and W lines of Kleberg 140-acre tract in Robert Stevenson Sur.	Spudded in.
C. F. Nichols' No. 1 Kimball, 225 ft. N, 40 deg. W of Grayburg Oil Co.'s No. 1 Kimball	Set surface csg.

BELL COUNTY

Alex Krause' No. 1 W. P. Edds, 650 ft. from S line, 150 ft. from W line of 100-acre tract in M. Moreno Sur.	T.D. 500 ft.; S.D.

BEXAR COUNTY

Amerada Petroleum Corp.'s No. 1 Peter Kiolbassa, 1,000 ft. from E line, 600 ft. from S line of 100-ac. tract, A. Mancho Sur., 4 miles SE St. Hedwig	T.D. 2,130 ft.; abnd.
Amsden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio	T.D. 1,040 ft.; set 4½-in. csg.
S. W. Blount's No. 1-A S. A. Land & Dev. Co., 10 ft. from No. 1 in I. Perez Sur.	T.D. 900 ft.; no report.
Eckert et al's No. 1 Edwards, 150 ft. to N and W lines of farm in Martinez Sur.	T.D. 1,900 ft.; drlg. in Edwards.
Moore-Jauer's No. 1 Holly R. Ellison, 2,916 ft. from E line, 1,500 ft. from S line of farm in T. York Sur.	T.D. 1,953 ft.; standing.
Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur.	T.D. 2,495 ft.; in Edwards, dry
Jones & Voltz' No. 1 Bonkowsky, 150 ft. to N and W lines of William McMenenes Sur., 12 miles E of San Antonio	T.D. 907 ft.; standing.
Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio	T.D. 1,330 ft.; S.D.
C. J. Webster Oil & Gas Co.'s No. 1 San Antonio Suburban Irrigated Farms, 200 ft. from S and W lines of Farm Lot 2, Blk. 49, in SW Bexar County	T.D. 407 ft.; drlg.

BROOKS COUNTY

Ed East's No. 1 A. Garcia, 600 ft. from N and E lines of 2.168-ac. tract in SW part of county	T.D. 1,502 ft.; drlg.
M. P. Evans' No. 1 J. M. Martinez, 200 ft. from N and W lines of Blk. 11, Sec. 6, La Encantada Sur.	T.D. 1,412 ft.; drlg.

DE WITT COUNTY

J. F. Richardson's No. 1 Virginia Taylor, 330 ft. from SE line of tract, 330 ft. NE of Minnehuilla Creek	T.D. 3,300 ft.; standing.

DUVAL COUNTY

Buchanan & Frates' No. 1 Hagist, cen. of SW Sur. 267	Set surface csg.
Delange & Frates' No. 1 Sevier, 1,845 ft. from N line, 2,945 ft. from W line of Sur. 213	Location.
Frank Gravis' No. 3 Schallert in Sur. 255 (Palangano salt dome)	T.D. 953 ft.; drlg.
Clark & Cowden's No. 1 Sutherland, 450 ft. from W line, 150 ft. from S line of Sur. No. 3	T.D. 2,956 ft.; abnd.
O. W. Killam's No. 1 Peters, 150 ft. from E line, 450 ft. from N line of SE of Sur. No. 1	T.D. 2,725 ft.; standing.
Payne & Vernon's No. 1 A. Roach, 665 ft. from E line 45 ft. from S line of Blk. 7, Survey No. 457	Derrick.
Plymouth Oil Co.'s No. 1 Parr, 6,250 ft. from W line, 1,925 ft. from S line of San Andres, Garcia grant	T.D. 4,482 ft.; drlg.

(Continued on Page 68)

LET'S CONTINUE TO MOVE AHEAD

This company supports all efforts to place the oil industry on an even keel.

We believe this support of the industry will best maintain our steady growth as a company.

W. G. Skelly

SKELLY OIL COMPANY

TULSA KANSAS CITY

EL DORADO, KANS.

Wildcat Operations in Oklahoma

(Continued from Page 46)

J. Morrison's No. 1 Fowler, NE SE Sec. 13-7-17 .....Rig.
C. Kennedy's No. 1 Travis, C SW NE Sec. 15-7-14 .....Rig.
Moffett & Hall's No. 1 Jones, NW cor. Sec. 14-8-14 .....Drlg. 1,350 ft.

PONTOTOC COUNTY

Edna Marie's No. 1 McWhirt, NE SE Sec. 11-2-6 .....S.D. 570 ft.
Vanderslice's No. 1 Meredith, NE SW, Sec. 17-2-4 .....Show oil 295-368 ft.; 6 bbls. est.; T.D. 317 ft.; S.D.
Sunray Oil's No. 1 Grant, SE NE Sec. 11-4-8 .....Drlg. 1,090 ft.

POTTAWATOMIE COUNTY

Brown et al's No. 1 Sauter, NW cor. Sec. 35-11-4 .....Digging cellar.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 33-12-24w .....S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w .....S.D. 3,420 ft.

SEMINOLE COUNTY

Donnelly et al's No. 1 Shepard, SE NE Sec. 4-8-8 .....Drlg. 300 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 23-9-17w .....Rig.
Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w .....Show oil 2,459-67 ft.; S.D. 2,467 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 .....Drlg. 1,935 ft.

Oklahoma Panhandle

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1E ..T.D. 4,720 ft.; to cement.

Southern Oklahoma

ATOKA COUNTY

Morris et al's No. 1 Ray, NE NW NE Sec. 8-2S-12 .....S.D. 505-09 ft.
Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3S-10 .....Drlg. 2,210 ft.

BRYAN COUNTY

Hughes' No. 1 Ayres, NE SW Sec. 36-7S-7 .....Drlg. 490 ft.

CARTER COUNTY

Russell's No. 1 Ratliff, NW NE NW SW Sec. 19-1S-2W ...Drlg. 1,659-70 ft.; show oil.

JEFFERSON COUNTY

Smith's No. 1 McCarty, SE NW NE Sec. 18-4S-8W .....Location.

MARSHALL COUNTY

J. T. Hogan's No. 1 Thompson, NE NW NE, Sec. 26-7S-6..Location.
Trailkill et al's No. 1 Spence, NE NW Sec. 10-7S-4 T.D. 917 ft.; S.D.

McCURTAIN COUNTY

Prassell et al's No. 1 Wagoner, SE NE Sec. 5-8S-27 .... Show oil 560 ft.; 620 ft S.D.
Stampfs' No. 1 Robert Harris, SW NW SW Sec. 14-9S-25..S.D. 2,778 ft.

PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3S-18 .....S.D. 1,950 ft.

STEPHENS COUNTY

Gillette Bros.' No. 1 Cooley, NW SE NW Sec. 17-2S-8W..Rig.
George's No. 1 Ryan, NW SW NE Sec. 31-1-15 .. .. S.D. 510 ft.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 60)

Sabine Bayou Dev. Co.'s No. 1,130 Caw, 330 ft. N and E, SW cor. SE, Sec. 9-12-5 .....S.D. 763 ft.
Texana Oil Co.'s No. 1 Clark-Morris Lbr. Co., 878 ft. N, 560 ft. E, C, Sec. 23-5-6 .....S.D. 2,504 ft.

OUACHITA PARISH

Monroe Oil & Royalties Co.'s No. 1 Thieler, 150 ft. N and E, SW cor. SE NW, Sec. 34-18-2e .....S.D. 100 ft.
Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1e, 330 ft. E, 240 ft. S, NW cor. SW SE.....S.D. 3,480 ft.

RED RIVER PARISH

C. F. Davis' No. 1 Pierson, 500 ft. S, 317 ft. E, NW cor. SW NW, Sec. 12-14-11.....Location.
Lawrence Decker, tr.'s No. 1 Madden, 1,650 ft. S and W, NE cor., Sec. 21-14-10 .....S.D. 1,026 ft.
La. Oil Dev. Co.'s No. 2 La. Delta Pecan Co., 2,950 ft. S, 300 ft. E, NW cor., Sec. 27-13-11.....Spudded and S.D. 50 ft.

RICHLAND PARISH

National Gas Co.'s No. 1 Singletary, 1,980 ft. N, 660 ft. W, SE cor., Sec. 20-18n-7e.....S.D. 2,515 ft.

SABINE PARISH

Adams & Roberson's No. 1 Peterson, 406 ft. N, 200 ft. W, SE cor. NE NE, Sec. 35-8-13 .....S.D. 100 ft.
R. W. Boulding's No. 1 Williams, Sec. 17-7-10, 200 ft. S and E, NW cor. SW NE..... Tested dry; S.D.; W.O. 2,620 ft.
Bridwell Oil & Gas Co.'s No. 1 Bray, 200 ft. N and W, SE cor., SE NW Sec. 32-8-11 .....Location.
Bridwell Oil & Gas Co.'s No. 2 Bray, 200 ft. S, 90 ft. W, NE cor. NE SW Sec. 32-8-11 .....Set 10-in. 102 ft.; set 6-in. 2,334 ft.
R. E. Brooke's No. 1 A. Gray, 330 ft. N and W, SE cor. SW NE, Sec. 35-8-13 .....Location.
V. V. Bull's No. 1 Henderson, 275 ft. N, 165 ft. E, SW cor. SW SE, Sec. 31-8-10 .....Set 10-in. 100 ft.; drlg. 260 ft.
F. M. Burke's No. 1 Gray, 454 ft. N, 265 ft. W, SE cor. SW SW, Sec. 3-7-13 .....Dry and abd. 2,450 ft.
Bob Chew's No. 1 O. Gray, 330 ft. N and E, SW cor. SW NW, Sec. 35-8-13 .....Location.
Cliff Oil Co.'s No. 1-A Martinez School, 720 ft. N, 105 ft. W, SE cor. NE SE, Sec. 4-7-13 .....W.O.S.R. 2,450 ft.
Clopton et al's No. 1 Campbell, 335 ft. S, 353 ft. W, NE cor. NW NE Section 5-7-11 .....Set 10-in. 100 ft.
Clopton et al's No. 1 Garcia, 330 ft. N and W, SE cor. SE NW Sec. 4-7-13 .....Derrick.
W. M. Coates' No. 1 Gray, 330 ft. N and W, SE cor. SW, Sec. 3-7-13 .....Location.
W. M. Coates' No. 2 Gray, 330 ft. S and W, NE cor. SE SW, Sec. 3-7-13 .....Location.
Coates Pet. Co.'s No. 2 Stille, 330 ft. N and E, SW cor. SE SW, Sec. 35-8-11 .....W.O.S.R. 2,465 ft.
Coates Pet. Co.'s No. 2 Stille, 330 ft. N and E, SW cor., Sec. 35-8-13 .....Location.
The Coming Oil Co.'s No. 1 Cobb, 330 ft. N and E, SW cor., Sec. 14-7-11 .....Rigging up.
Craig et al's No. 1 Travis, Sec. 12-7-11, 200 ft. S and E, NW cor. SE NW .....Comp. pumping 30 bbls. 2,580 ft.
Crescent Drlg. Co.'s No. 1 Williams, 370 ft. E, 330 ft. S, NW cor. N½ SW, Sec. 21-7-12 .....Location.
Crescent Drlg. Co.'s No. 2 Williams, 330 ft. S and W, NE cor. SE NW, Sec. 21-7-12 .....Location.
Mark Curtis et al's No. 1 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SE, Sec. 35-8-13 .....Drlg. 50 ft.
B. Q. Daniels' No. 1 Armstrong, SE cor. SE NE, Sec. 31-8-10 .....Location.
R. E. Davidson's No. 1 Davis, 600 ft. S, 125 ft. E, NW cor., Sec. 23-7-11 .....Derrick.
William DeSota's No. 1 Mooney, 350 ft. S, 395 ft. E, NW cor., Sec. 35-8-13 .....Rigging up.
B. A. Ferrell's No. 1 Haley, Sec. 6-7-12, 300 ft. S and E, NW cor. NW SW.....S.D. 2,150 ft.
Harry Flinchbaugh's No. 1 Sepulbedo, 250 ft. N and E, SW cor. SE NE, Sec. 4-7-13 .....W.O.S.R. 2,424 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 200 ft. W, NE cor. NW NW, Sec. 10-8-13 .....Coring hard lime 6,128 ft.
W. N. Hankins' No. 1 Tilley, 200 ft. E, 30 ft. S, NW cor. SE SE, Sec. 30-8-12 .....Rigging up.
Howard et al's No. 1 Williams, 300 ft. N and E, SW cor. SE NW, Sec. 13-7-11 .....W.O.S.R. 2,580 ft.
J. B. Huges' No. 1 Stille, 283 ft. N, 282 ft. W, SE cor. SE SW, Sec. 36-8-11 .....S.D.; W.O. 2,693 ft.

Ab Jones' No. 1 Garcia, 200 ft. S and W, NE cor. NW SE, Sec. 4-7-13 ..... Set 10-in. 100 ft.
G. E. Jordan's No. 1 Dew, 330 ft. N, 340 ft. E, SW cor. SW SE, Sec. 34-8-11 ..... Rigged up and S.D. for water.
A. D. King, tr.'s No. 1 Davis, 170 ft. N, 410 ft. E, SW cor. NW NE, Sec. 29-7-11 ..... Location.
A. D. King, tr.'s No. 1 T. L. Andries, 200 ft. S, 300 ft. E, NW cor. SE SE, Sec. 15-7-11 ..... Derrick.
S. A. Lane et al's No. 1 DeKeyser, 333 ft. E, 330 ft. S, NW cor. NE, Sec. 22-7-11 ..... S.D.; W.O. 2,930 ft.
Geo. LeGrand's No. 1 McGough, Sec. 3-8-10 ..... S.D. 1,450 ft.
Magnolia Pet. Co.'s No. 1 Williams, 155 ft. S, 408 ft. W, NE cor. NW, Sec. 6-7-10 ..... Rigging up.
H. C. Maulding's No. 1 Moores, 330 ft. S and W, NE cor. SE NE Sec. 16-7-12 ..... Derrick.
Paul L. Miller's No. 1 Lucius, 175 ft. N and W, SE cor. NE SW, Sec. 31-8-10 ..... Set 10-in. 100 ft.; S.D. 1,100 ft.
Ray Murray's No. 1 Lefkobits, 210 ft. S, 330 ft. W, NE cor., Sec. 5-7-13 ..... Location.
Hill Myers' No. 1 Garcia, 200 ft. N and W, SE cor. SW NW, Sec. 4-7-13 ..... Arranging to set 6-in. 2,016 ft.
E. F. Neely's No. 1 Rains, 660 ft. N, 100 ft. W, SE cor., SW NW, Sec. 14-7-11 ..... W.O.S.R. 2,541 ft.
Neely et al's No. 1 C. Henry, Sec. 23-7-11 ..... Rigging up.
C. D. Neff, tr.'s No. 1 Snell, Sec. 9-7-11, 350 ft. N, 660 ft. W, SE cor. Sec. ..... W.O.S.R. 2,509 ft.
Palmer & Smitherman's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and E, NW cor. NE SE ..... Location.
Palmer & Smitherman's No. 2 La. Long Leaf Lbr. Co., 330 ft. S and W, NE cor. SE, Sec. 12-7-11 ..... Location.
Pelican Natural Gas Co.'s No. 2 Buckley, 330 ft. S and W, NE cor. NW NW, Sec. 6-7-10 ..... Rigging up.
Roy Raines et al's No. 1 Beard, 720 ft. E, 700 ft. N, SW cor. SW SE, Sec. 8-8-10 ..... Derrick.
J. H. Reeves' No. 1 Sabine State Bank, NE SW, Sec. 28-8-11 ..... Comp. pumping 25 bbls. 2,575 ft.
Thornton et al's No. 1 S. S. Martinez, 355 ft. S, 330 ft. W, NE cor. SE NE, Sec. 4-7-13 ..... Set 10-in. 105 ft.; drlg. 550 ft.
Otis A. Roberts' No. 1 S. S. Martinez, 312 ft. E, 25 ft. S, NW cor. SE NE, Sec. 4-7-13 ..... Drlg. 1,475 ft.
Otis A. Roberts' No. 1 Sabine Lbr. Co., 224 ft. S, 481 ft. W, NE cor. SW NE, Sec. 5-7-13 ..... Rigging up.
Robeste & Sledge's No. 1 Lefkobits, 346 ft. S, 673 ft. E, NW cor. SE NE, Sec. 5-7-13 ..... Derrick pattern.
Robeste & Sledge's No. 2 Sabine Lbr. Co., 803 ft. W, 796 ft. N, SE cor. SE SW, Sec. 5-7-13 ..... Location.
Robeste & Sledge's No. 3 Sabine Lbr. Co., 413 ft. N, 479 ft. W, SE cor. SE SW, Sec. 33-8-13 ..... Location.
Bill Rowe's No. 1 Sepulbedo, 530 ft. N, 200 ft. E, SW cor. SE SE, Sec. 4-7-13 ..... Arranging to set 6-in. 1,997 ft.
Skully & Beach's No. 3 Lafitte, 1,400 ft. S, 133 ft. W, NE cor. NW NW, Sec. 13-7-11 ..... Location.
Skully & Beach's No. 2 Lafitte, 149 ft. S, 228 ft. E, NW cor., Sec. 13-7-11 ..... S.D. 2,360 ft.
H. R. Smith et al's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and W, NE cor. NW SW ..... Location.
W. W. Smith et al's No. 1 Sepulbedo, 230 ft. N, 250 ft. W, SE cor., Sec. 4-7-13 ..... Set 6-in. 1,997 ft.; T.D. 2,005 ft.
Sneed & Sneed's No. 1 Pearce, 200 ft. N, 215 ft. E, SW cor. NE SW, Sec. 35-8-13 ..... S.D.; W.O. 2,405 ft.
Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W, SE cor. NE NE, Sec. 13-9-11 ..... S.D. 1,905 ft.
H. B. Stacey et al's No. 1 Hefkobits, 457 ft. N, 583 ft. E, SW cor. SE, Sec. 34-8-13 ..... Derrick.
State Prod. Co., Inc.'s No. 1-B Davis, 200 ft. N and E, SW cor., Sec. 17-7-10 ..... Derrick.
Supreme Oil Co.'s No. 1 Pruitt, 330 ft. N and E, SW cor. SE SW, Sec. 30-8-11 ..... S.D. 1,640 ft.
B. E. Taylor's No. 1 Gay, 232 ft. S, 476 ft. E, NW cor. SE SW, Sec. 36-8-13 ..... Location.
B. E. Taylor's No. 1 Wooley, 330 ft. N and E, SW cor. SE SW, Sec. 36-8-13 ..... Location.
A. F. Tarver's No. 3 Cutrer, Sec. 12-7-11, 1,120 ft. E, 300 ft. N, SW cor. NW ..... W.O.S.R. 2,600 ft.
A. F. Tarver's No. 1 R. Stoker, 1,980 ft. S, 1,320 ft. W, NE cor., Sec. 34-8-10 ..... Dry and abd. 3,250 ft.
Thornton et al's No. 2 S. S. Martinez, 312 ft. E, 205 ft. S, NW cor. SE NE, Sec. 4-7-13 ..... Location.
A. A. Trammell's No. 1 Sepulbedo, 330 ft. N and W, SE cor. NW NE, Sec. 5-7-13 ..... Derrick.
Triangle Drlg. Co.'s No. 1 La.-Long Leaf Lbr. Co., 330 ft. N and W, SE cor. Sec. 11-6-11 ..... Set 12½-in. 213 ft.
W. C. Turnbow's No. 1 Williams, 200 ft. W C E line SW NW, Sec. 13-7-11 ..... Location.
W. C. Turnbow's No. 2 Williams, 175 ft. S, 200 ft. E NW cor. SW NW, Sec. 13-7-11 ..... Drlg. 6-in. plug 2,527 ft.
Tuffree et al's No. 1 T. L. Andries, N½ NE SE, Sec. 15-7-11 ..... S.D. 100 ft.
C. C. Walker's No. 1 Noble-Neely, 330 ft. S and E, NW cor. SW, Sec. 36-8-13 ..... S.D. 1,700 ft.
Wurtsbaugh & Torren's No. 1 Peterson, 330 ft. N and W, SE cor. SW NE, Sec. 26-8-13 ..... Location.
Wurtsbaugh & Torran's No. 1 Gray, 330 ft. N and SE cor. SE NW, Sec. 35-8-13 ..... Set 3-in. 2,056 ft.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12 ..... Reaming 3,590 ft.

VERNON PARISH

Llano Co-operative Colony's No. 1 fee, NW NE, Sec. 34-2n-9w ..... Arranging to set 10-in. 1,300 ft.

WEBSTER PARISH

George Pearce et al's No. 1 Ambrose, 200 ft. N and W, SE cor. SW SE, Sec. 22-20-10 ..... Derrick.

WINN PARISH

P.V.T. Oil Co.'s No. 1 Southern Paper Co., 150 ft. S and W, NE cor. SW, Sec. 28-13-3 ..... Set 10-in. 63 ft.

Arkansas

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-3 ..... 1,253 ft.

CLEBURNE COUNTY

Frank S. Craver et al's No. 2 Doniphan Lbr. Co., 700 ft. N, 200 ft. E, SW cor. SW, Sec. 34-11-9 ..... Location.

CLEVELAND COUNTY

Crum & Stillwell's No. 1 E. R. Bell, Sec. 10-10s-12 ..... Rigged up and S.D.

DALLAS COUNTY

J. H. James, tr.'s No. 1 Fordyce Lbr. Co., 200 ft. S, 200 ft. E, NW cor. SE, Sec. 11-9-15 ..... S.D. 2,575 ft.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 Ogles, Sec. 35-15-5, 330 ft. S and E, NW cor. NE NW ..... Drlg. hard shale 2,703 ft.

FRANKLIN COUNTY

Ozark Natural Gas Co.'s No. 1 Monroe, C NW NE, Sec. 13-8-29 ..... Location.

HOT SPRINGS COUNTY

Star Oil Co.'s No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16 ..... S.D. 1,340 ft.

LINCOLN COUNTY

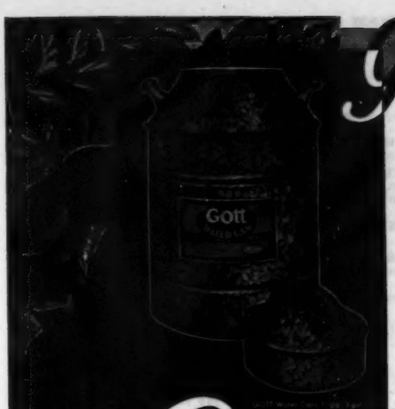
Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW, Sec. 5-8-7 ..... Fishing for drill stem 2,800 ft.

LITTLE RIVER COUNTY

Harrell et al's No. 1 Taffee, 33 ft. W, 630 ft. E, 330 ft. S, SW cor. W NW, Sec. 25-12s-32w ..... Derrick.

MILLER COUNTY

C. E. Litchfield's No. 1 Hervey, 535 ft. S, 350 ft. W, NE cor. NE NW, Sec. 2-15-26 ..... T.A. 2,885 ft.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Fitzwater et al's No. 1 E. A. McCowand, NW cor. NW SE, Sec. 22-15-28 ..... Derrick pattern.
Fitzwater et al's No. 1 C. J. Norsen, SW cor. SE SW, Sec. 20-15-27 ..... Moving in rig.
Fitzwater et al's No. 1 Beck, Sec. 33-15-26 ..... S.D. 2,926 ft.
C. E. Litchfield et al's No. 1 Stone, SE cor. SW, Sec. 32-14-26 ..... Rigging up.
W. S. Neal et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-20-27 ..... S.D; W.O. 2,600 ft.
Fred Pederson's No. 1 Fouke, 150 ft. S and W, NE cor., Sec. 11-17-27 ..... Location.

OUACHITA COUNTY

Copenhaven et al's No. 2 Berg, C SE SE, Sec. 13-15-17.. W.O.S.R. 2,208 ft.
McLean et al's No. 1 L. D. Neely, Sec. 23-15-16, 200 ft. N and W, SE cor. NE SW ..... S.D. 102 ft.
Chas. Steele et al's No. 1 Anderson, 155 ft. S, 150 ft. E, from center Section 36-12-18 ..... S.D. 525 ft.

PIKE COUNTY

E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 31-8-24 ..... S.D.; W.O. 1,020 ft.
E. R. Henderson's No. 1 W. B. East, 300 ft. S, 150 ft. W, NE cor., Sec. 13-9-23 ..... Rigging up on new hole.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW, Sec. 3-4n-6w ..... Partly rigged up and S.D.

SCOTT COUNTY

Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29 ..... S.D. 1,360 ft.

SEVIER COUNTY

Tristate Oil Co.'s No. 1 Grimble, Sec. 34-8-32, S½ SW.. S.D. 950 ft.

ST. FRANCIS COUNTY

E. R. Henderson's No. 1 Britton, Sec. 1-4-1e, 1,000 ft. S and E NW cor. NE NW ..... Drlg. 2,575 ft.

UNION COUNTY

Cox et al's No. 1 Goodwin, 360 ft. S, 180 ft. W, NE cor. SW SW, Sec. 3-16-16 ..... Drlg. 68 ft.
H. H. Holmes' No. 1 C. H. Murphy, NE cor. NW NE, Sec. 31-16-14 ..... S.D. 2,875 ft.
Wilson & Chapman's No. 1 King, Sec. 3-18-13, 330 ft. N and E, SW cor. NE NE ..... Derrick.
Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE, Sec. 3-18-13 ..... S.D. 1,678 ft.

WASHINGTON COUNTY

(Cable tools)

A. B. Chase and Ed Rogers' No. 1 Cunningham, 125 ft. S, 300 ft. W, NE cor. SW NE, Sec. 14-15-32 ..... S.D. 1,750 ft.

East Texas

BOWIE COUNTY

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur. ..... S.D. 4,505 ft.
Lanford et al's No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur. ..... S.D. 1,792 ft.

CASS COUNTY

Davis & Pigg's No. 1 Roy Bryan, SW cor. Roy Bryan 88-ac. tr., Albert H. Lattimer Sur. ..... S.D. 2,860 ft.
C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.
John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 86 ac. in K. E. Welborn Sur. .... S.D. 2,280 ft.
John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. ..... S.D. 960 ft.

HARRISON COUNTY

M. E. Nash et al's No. 1 Henderson, G. L. Bledsoe Sur... S.D. 55 ft.
Ryan Cons. Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. ..... Rigged up and S.D.
Triangle Drlg. Co.'s No. 1 Platt, 1,125 ft. W, 1,995 ft. N, SE cor. F. C. Barker Sur. ..... Location.

MARION COUNTY

Baunech Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E. SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson) ..... Drlg. shale 4,090 ft.
Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 2,555 ft. E most easterly W line, Alexander Albright Sur. ..... S.D. 2,350 ft.
Purcell et al's No. 1 Coker, M. Reed Sur. ..... S.D. 1,967 ft.

PANOLA COUNTY

Moses & Wallace's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur... S.D. for D.S. 740 ft.
J. L. Nelson et al's No. 1 J. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in James Hanks Sur. ..... S.D. 3,055 ft.

SHELBY COUNTY

E. H. Francis' No. 1 John Mima, Mary Smith Sur. ..... Drlg. 1,230 ft.
General Minerals Co.'s No. 2-B Holt, Matthew Moore Sur. Salt water and abd. 4,017 ft.
General Minerals Co.'s No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. D. S. Height Sur. ..... Rigging up.
Henry Maulding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 20-ac. tr., A. D. Fountain Sur. ..... Rigged up and S.D.
McRoby et al's No. 1 Windham, Wm. Leach Sur., on Windham 296-ac. tr. ..... Dry and abd. 3,393 ft.
Prairie Creek Crude Co.'s No. 1 Ellington, 150 ft. N and 200 ft. W from SE cor. 42-a. tr. of J. Burleson Sur.. S.D. for water 1,270 ft.
Ridgeway et al's No. 1 Polley, Domingues Gonzales Sur., 3,180 ft. E of SW cor., 180 ft. N at right angles of Polley 457-ac. tr. ..... Tested dry; S.D. 2,375 ft.
Sedberry et al's No. 1 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. Jane Stoddard Sur. ..... S.D.; W.O. 1,768 ft.
Western World's No. 1 Foster, Billingsby-Jeremiah Bowlin Sur. ..... S.D. 2,940 ft.
Wray & Dunbar's No. 1 C. A. Hayden, 600 ft. N and W SE cor. 153-ac. tr. in D. T. F. Yordt Sur. ..... Drlg. 2,133 ft.

Louisiana-Arkansas Proven Areas

North Louisiana

CADDO PARISH—PINE ISLAND

Company, well, farm name, section and block—	Remarks:
Louana Oil & Gas Co.'s No. 1 Cushman, 1,320 ft. N, 600 ft. E, SW cor., Sec. 33-19-16	Drlg. chalk 1,607 ft.

CLAIBORNE PARISH

Triangle Drlg. Co.'s No. 1 Brown, 1,542 ft. N, 1,900 ft. W, SE cor. NE, Sec. 1-19-6 ..... Drlg. 513 ft.

OUACHITA PARISH

Carbon Con.'s No. 7 Guthrie, Sec. 50-20n-4e, 5,283 ft. N, 7,475 ft. W of cors. of Secs. 25, 26 and 49, in Sec. 50 ..... Location.

SABINE PARISH—ZWOLLE

Abbott & Rankin's No. 1 Nulton, 330 ft. S and E, NW cor. SE NE, Sec. 2-7-13 ..... Rig moved; derrick.
Abbott & Rankin's No. 1 Towley, 330 ft. S and E, NW cor. SE NW, Sec. 1-7-13 ..... Set 10-in. 100 ft.; drlg. 1,100 ft.
Acme Oil & Gas Co.'s No. 3 La. Long Leaf, 535 ft. W, 80 ft. N, SE cor., Sec. 3-7-11 ..... Derrick.
Baird Bros.' No. 2 S. S. Martinez, NW cor. NW SW Sec. 2-7-13 ..... Set 10-in. 102 ft.; drlg. 1,025 ft.
Coates Pet. Co.'s No. 2-B Nulton, 330 ft. N and E, SW cor. SW NE, Sec. 3-7-13 ..... Drlg. 1,200 ft.
Coates Pet. Co.'s No. 3 S. S. Martinez, 330 ft. S, 300 ft. E NW cor. SE NE Sec. 3-7-13 ..... Drlg. 2,208 ft.
Dengall O. & G. Co.'s No. 1-F Nulton, 330 ft. S and E, NW cor. SW NW, Sec. 3-7-13 ..... Drlg. 2,309 ft.
Dengall O. & G. Co.'s No. 1-G Nulton, 350 ft. N, 330 ft. W, SE cor. NE NE, Sec. 3-7-13 ..... Comp. pumping 75 bbls. 2,419 ft.
Dengall O. & G. Co.'s No. 3-G Nulton, 330 ft. N and E, SW cor., NE NE, Sec. 3-7-13 ..... S.D; W.O. 2,475 ft.
Edwards & Hubien's No. 1 Martinez, 855 ft. E, 641 ft. N SW cor., Sec. 2-7-13 ..... Derrick.
J. E. Grandstaff's No. 1 Johnson, S½ SW SW, Sec. 2-7-11. Set 6-in. 2,338 ft.
E. W. Gill's No. 1 Gray, 200 ft. S and W, NE cor. SW SW Sec. 3-7-13 ..... Rigging up.
J. J. Hall's No. 4 Jacoba, 175 ft. W, 300 ft. N, SE cor. Sec. 1-7-11 ..... Drlg. 1,250 ft.
E. D. Holcomb's No. 1 La. Long Leaf Lbr. Co., 200 ft. E, 145 ft. N, SW cor. SE SE, Sec. 12-7-11 ..... Location.
D. D. Holcomb's No. 2 Quayhagiew, 149 ft. N, 200 ft. E SW cor. SE SE, Sec. 11-7-11 ..... Derrick.
Hutchini et al's No. 1 Garcia, 382 ft. N, 354 ft. W, SE cor. NE SW, Sec. 4-7-13 ..... Derrick pattern.
H. M. Jones' No. 1 Raines, 300 ft. S, 150 ft. W, NE cor. NW NW, Sec. 14-7-11 ..... Derrick.
A. D. King, trustee's No. 1 Webb, 300 ft. S and E, NW cor. NW SW, Sec. 31-8-11 ..... Rigging up.
W. F. Lacey's No. 2 Hughes, 330 ft. S and E, NW cor. E½, Sec. 10-7-11 ..... Dry and abd. 2,552 ft.
W. F. Lacey's No. 1 Hughes, 40 ft. N, 106 ft. W, SE cor. NW SW, Sec. 11-7-11 ..... Dry and abd. 2,621 ft.
Lanier et al's No. 2 Newton, 400 ft. N, 330 ft. W, SE cor. NW, Sec. 3-7-13 ..... Drlg. 2,262 ft.
Lion Oil Ref. Co.'s No. 2 LaRoux, 354 ft. S and W, NE cor. SW SE, Sec. 2-7-13 ..... Location.
Loring Oil Co.'s No. 18 Bowman-Hicks, 1,280 ft. S, 275 ft. E, NW cor. SW NW, Sec. 15-7-12 ..... Set 8⅝-in. at 5,272 ft.
Loring Oil Co.'s No. 1 Martinez, 330 ft. N and W SE cor. NW NE, Sec. 3-7-13 ..... Comp. flowing 700 bbls. 2,066 ft.
H. D. McDonald's No. 1 T. L. Andrin, 180 ft. E, 150 ft. N, SW cor. NW SE, Sec. 15-7-11 ..... Derrick.
Frank Melat's No. 1 Davis, 175 ft. W, 225 ft. S, NE cor., Sec. 2-7-11 ..... Set 10-in. 102 ft.
Ben Merritt, trustee's No. 1 Chadick, SW cor. SW NE, Sec. 31-8-10 ..... Derrick.
Ben Merritt, trustee's No. 1-B Nulton, 570 ft. N, 350 ft. W, SE cor. SW NE, Sec. 3-7-13 ..... Drlg. 2,220 ft.
C. D. Neff, tr.'s No. 1 Stoker, 212 ft. N and W, SE cor. NE SW, Sec. 10-7-11 ..... Derrick.
Pelican Nat. Gas Co.'s No. 15 Louisiana Long Leaf Lbr. Co., 330 ft. N and W, SE cor. SE SW, Sec. 5-7-11 ... Set 6-in. 2,324 ft.
T. L. Phillips et al's No. 1 Haley, 330 ft. S and E, NW cor. NW SE, Sec. 6-7-13 ..... Derrick.
F. G. Reid's No. 4-A McNeely, 300 ft. S and W, NE cor. NW NE, Sec 14-7-11 ..... W.O.S.R. 2,570 ft.
C. T. Ruffian's No. 2 Libby, 330 ft. S and E, NW cor. NE NW, Sec. 8-7-11 ..... Set 6-in. 2,292 ft.
Sabine Prod. Co.'s No. 2 Pearce, Sec. 10-7-11, 330 ft. S and E, NW cor. SE NW ..... S.D.; W.O. 2,699 ft.
Sabine Prod. Co.'s No. 2 Sabine Lbr. Co., 330 ft. S and E from center of Sec. 3-7-13 ..... Coring 2,030 ft.
Self & Kissick's No. 2 Moran, C W½ SE NE, Sec. 1-7-11. Drlg. 2,150 ft.
Service Drlg. Co.'s No. 3-A Gardner, 138 ft. S, 134 ft. W, NE cor., Sec. 12-7-11 ..... W.O.S.R. 2,454 ft.
Ben F. Smith's No. 2 Turner, 250 ft. N, 450 ft. E, SW cor. NW NW, Sec. 4-7-11 ..... Set 10-in. 100 ft.
W. S. Smith, trustee's No. 1 Hamilton, 330 ft. N and E, SW cor. NE NE, Sec. 32-8-11 ..... Derrick.
F. E. Stancil's No. 1 Pouder, 273 ft. S, 397 ft. E, NW cor. NE SE, Sec. 10-7-11 ..... S.D. 2,593 ft.
F. E. Stancil's No. 2 Pouder, 805 ft. N, 283 ft. E, SW cor. SE SE, Sec. 10-7-11 ..... Location.
State Prod. Co.'s No. 1 Keasele, 150 ft. N and W, SE cor. NW SW, Sec. 3-7-13 ..... Rigging up.
State Prod. Co.'s No. 1 Sabine Lbr. Co., 365 ft. N, 100 ft. W SE cor. NW SW Sec. 3-7-13 ..... Drlg. 1,530 ft.
The Texas Company's No. 2 Maines, 330 ft. N and E, SW cor. SE, Sec. 5-7-11 ..... Derrick.
The Texas Company's No. 2 Nabours, 576 ft. W, 337 ft. S NE cor., SE, Sec. 3-7-11 ..... Set 10-in. 100 ft.; coring 2,350 ft.
E. M. Thompson's No. 1 Travis, 350 ft. N and E, SW cor. SE SW, Sec. 12-7-11 ..... Testing 2,497 ft.
A. A. Trammell's No. 1 Hill, 330 ft. S and W, NE cor. SE SE, Sec. 32-8-11 ..... Rigging up.
J. P. White's No. 1 Nulton, 330 ft. N and E, SW cor. NE NW, Sec. 1-7-13 ..... Arranging to set 6-in. 2,050 ft.
George Woulf's No. 1 Nulton, 330 ft. S, 330 ft. E, NW cor. SW NE, Sec. 3-7-13 ..... Rigging up.

UNION PARISH

Southern Carbon Co.'s No. 60 fee, 36 ft. W, 482 ft. S, NE cor. NW, Sec. 20-20-4e ..... Set 6-in. 2,095 ft.

Arkansas

UNION COUNTY—URBANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW, Sec. 11-18-13 ..... T.A. 3,580 ft.
Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13 ..... Location.
Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13, 330 ft. S and W, NE cor. SE NW ..... T.A. 3,545 ft.
Wilson & Chapman's No. 2 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE ..... S.D. 1,730 ft.

East Texas

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur. ..... S.D. 3,359 ft.
United Prod. Corp.'s No. 17 Steele, 1,320 ft. N, 660 ft. W, SE cor. C. D. Steele lse., in B. C. Jordan Sur. .... Location.

Mississippi

HINDS COUNTY

Hensiee et al's No. 1 Warner, 200 ft. S and E NW cor. NE SE, Sec. 14-5n-1e ..... Set 5 3/16-in. 2,465 ft.
Cleve Love et al's No. 1 Security Realty Co., 700 ft. E, 300 ft. S, NW cor. NE NW, Sec. 1-5n-1e ..... Set 6⅝-in. 2,376 ft.
McGuire et al's No. 1 Spring Lake, Sec. 11-5n-1e, 350 ft. N, 450 ft. W, from center of Sec. ..... T.A. 3,487 ft.
Ridgeway & McGehee's No. 2 Mosal, 300 ft. W, 200 ft. N, SE cor. NE SW, Sec. 24-6n-1e ..... Rigging up.

RANKIN COUNTY

Meredith-Smith et al's No. 3 Strawder, 400 ft. S, 750 ft. W, NE cor., Sec. 13-5n-1e ..... Testing 2,347 ft.

Wildcat Operations in Mississippi

CLARKE COUNTY

Company, well, farm name, section and block—	Remarks:
F. X. Gowans et al's No. 1 Elfring, SE NE, Sec. 13-1n-14e.	S.D. 104 ft.

HINDS COUNTY

Atkins et al's No. 1 Crane Lawrence, Sec. 22-6n-1e, 300 ft. E, 133 ft. N, SW cor. NE SE ..... Arranging to set 5½-in. 2,485 ft.
Miss.-Minn. Oil Co.'s No. 1 Edwards Land Co., Sec. 23-6n-4w, 1,200 ft. N and E from center of Sec. ..... Reaming to bottom 3,050 ft.

LAMAR COUNTY

Stauffer & Kourl's No. 1 Bond, SE NE, Sec. 18-3n-14w. Drlg. 2,320 ft.

LOWNDES COUNTY

Lowndes County Oil & Dev. Co.'s No. 1 Carr est., Sec. 34-17-16e, 1,320 ft. E, 330 ft. S, NW cor. Sec. ..... Reaming 2,100 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Rye, Sec. 22-15s-17w ..... Drlg. 1,150 ft.

NEWTON COUNTY

Bob Dalton's No. 1 Majura, 400 ft. N, 300 ft. E, SW cor. SE, Sec. 25-6n-11e.....S.D. 1,520 ft.

NOXUBEE COUNTY

Thompson & Donohue's No. 1 Donohue, Sec. 25-16n-17e..S.D. 1,735 ft.

RANKIN COUNTY

James Alexander, tr.'s No. 1 Holmes, 445 ft. E, 375 ft. N, SW cor. NW, Sec. 31-4n-2e .....Dry and abd. 2,539 ft.

Ferguson Fuller et al's No. 1 Ivey, 120 ft. W and S NE cor. NW, Sec. 13-5n-1e .....Drlg. 2,359 ft.

Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e. Derrick.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-4-9.....S.D. 750 ft.

Wildcat Operations in Alabama

LAMAR COUNTY

(Cable tools)

Company, well, farm name, section and block— Remarks:

DeSoto O. & G. Corp.'s No. 1 Gardner, NW NW, Sec. 22-15s-16w .....Drlg. sandy lime 2,772 ft.

MOBILE COUNTY

Ohio Oil Co.'s No. 1 James Bethel, 330 ft. N and E, 3,300 ft. E of NW cor. SW SE, Sec. 34-3s-3w.....Drlg. 3,800 ft.

J. C. Prine et al's No. 1 M.&O.R.R., Sec. 33-2n-4w .....Drlg. 1,950 ft.

WASHINGTON COUNTY

South Alabama O. & G. Co.'s No. 1 Wilson, Sec. 26-7n-1w. Rigging up.

Gulf Coast Fields and Wildcats

(Continued from Page 58)

Sun Oil Co.'s No. 3 Higgins, Wm. Hodges Sur., 50 ft. from E line of tr. and direct offset McAlbert Oil Co.'s No. 2-B Higgins .....Salt 1,651 ft.; top of salt 1,470 ft.; drill pipe stuck; set whipstock 1,927 ft.; drlg. rock 1,363 ft.

Sun Oil Co.'s No. 3 Smith (W.O.), W. D. Smith Sur. ...Drlg. hard sand and lime 5,552 ft.

The Texas Company's No. 7 Wilburn (D.D.), Henry Griffith League .....Rig up to deepen 4,422 ft.

Texas Gulf Prod. Co.'s No. 2 Cornelia Barber, Henry Griffith League, 514 ft. W, 41.5 ft. S of NE cor. of tr. ....Sand showing oil 4,285-4,309 ft.; cmtd. 7-in. csg. 4,280 ft.

Texas Gulf Prod. Co.'s No. 3-C Kirby, 562 ft. from W line, 50 ft. from S line of "C" lease .....Spudded.

Texas Gulf Prod. Co.'s No. 10-H Kirby, Henry Griffith League, 30 ft. W of No. 3 Ilfrey .....Drlg. rock 3,676 ft.; salt 1,396-2,665 ft.

Texas Gulf Prod. Co.'s No. 11-A Kirby, Henry Griffith League, 1,090 ft. from W line and 225 ft. from S line of "A" lease .....Derrick.

Texas Gulf Prod. Co.'s No. 11-H Kirby, Henry Griffith League, 150 ft. W of No. 10-H ....Drlg. salt 2,163 ft.; top of salt 1,388 ft.

Yount Lee Oil Co.'s No. 4-A Zadie Fisher, Wm. Bloodgood Sur., 301 ft. from W line and 96 ft. from S line of tract .....Derrick.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co. and Humble O. & R. Co.'s No. 2-A F. I. Booth (second hole), Samuel Kennedy Sur., 75 ft. S of No. 2-A (first hole) .....Rigging up.

Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 3-A T. I. Booth, Samuel Kennedy Sur., 200 ft. due S The Texas Company's No. 1 Wolters .....Rig.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 2 Davis, Robt. Peebles Sur., 2,483 ft. E, 150 ft. S of NW cor. of 1,000-ac. tr. ....Set 181½ ft. of screen and liner 5,365 ft.; comp. flowing 10 bbls. hourly, 5/16-in. choke.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 4 Lockwood, J. Rabb Sur., 3,000 ft. E and 330 ft. N of SW cor. of tract .....Abnd. after blowout and fire 4,520 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 4-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. E. 300 ft. N of SW cor. of Tr. 3 .....T.D. 5,191 ft.; D.S. test 5,064-5,114 ft.; flowed 37 bbls. oil and wash water in 1¾ hrs.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 6-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from E line and 330 ft. from N line of 469-acre tract .....Sand and shale 5,204 ft.; cmtd. 7-in. csg. 5,190 ft.

Humble O. & R. and Gulf Prod. Co.'s No. 7-A Lockwood & Sharp, John Rabb Sur., 1,500 ft. E of No. 3-A .....Drlg. gumbo 3,423 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 8-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. W, 300 ft. S NE cor. of 369.3-ac. tract .....Derrick.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 3-B Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from E line and 300 ft. from N line of Tr. 1 (938.75 ac.)..Drlg. shale and lime 4,659 ft.

The Texas Co.'s No. 1 Wolters (M. H. Gubbels), Samuel Kennedy Sur., 742 ft. from W line, 100 ft. from S line of 100-ac. tract .....Set 87 ft. of 7-in. screen and 3-in. tubing 5,322 ft.; comp. flowing 1,000 bbls., 14 per cent b.s., ⅛-in. choke.

The Texas Company's No. 2 Wolters, Samuel Kennedy Sur., 150 ft. out of SE cor. of 100-acre lease .....Derrick.

SOUR LAKE—HARDIN COUNTY

Prudential Oil Co.'s No. 1 Maco Stewart, Stephen Jackson Sur., 1,050 ft. from S line and 150 ft. from W line of 50-acre tract .....Drlg. sand rock 1,510 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 28 Cade, N. Fitzsimmons Sur., 600 ft. S, 150 ft. E from No. 26.....T.D. 6,275 ft.; set screen 5,53-5,615 ft.; comp. flowing 720 bbls. P.L. oil, ¼-in. choke.

Yount Lee Oil Co.'s No. 29 Cade, N. Fitzsimmons Sur., 300 ft. E of No. 27 and 240 ft. N of No. 16 .....Sand showing oil 5,244-75 ft.; comp. flowing 900 bbls. P.L. oil, ¾-in. choke, 230 lbs. pressure.

Yount Lee Oil Co.'s No. 30 Cade, N. Fitzsimmons Sur., 300 ft. NE of No. 28 in line parallel with NW line Blk. 15 .....Rig.

Yount Lee Oil Co.'s No. 31 Cade, N. Fitzsimmons Sur., midway between and in line with Nos. 21 and 29 Cade .....Rig.

Yount Lee Oil Co.'s No. 2 Broussard & Orme, Martin Duman Sur., 300 ft. SE of No. 1 .....Drlg. hard sand and lime 4,962 ft.

Yount Lee Oil Co.'s No. 12 Smith, Martin Dunman Sur., 330 ft. W of No. 11 and 100 ft. N of No. 2 .....Spudded.

Yount Lee Oil Co.'s No. 2 M. M. Spencer, Martin Dunman Sur., center of tract in line with No. 11 Smith and No. 2 Nellie League .....Drlg. gumbo 1,220 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 86 "J" lease .....T.D. 1,017 ft.; 1 jt. screen 1,016 ft.; bailing.

HUMBLE—HARRIS COUNTY

Burt & Deerings No. 2 C.O.&G.-Texas Co. fee, J. B. Stephenson Sur., 50 ft. E and 50 ft. S of SE cor. of Wheeler & Pickens Blk. 24 in 25-acre tract .....Drlg. shale 1,008 ft.

Rio Bravo Oil Co.'s No. 1 Westheimer, 965 ft. W and 300 ft. N of SE cor. of Westheimer Subd., John Jones Sur. .....Gumbo 1,032 ft.; cmtd. 10-in. csg. 989 ft.

Sun Oil Co.'s No. 57 River, R. Dunman Sur., 200 ft. due E of No. 53 .....Sand 1,300-18 ft.; comp. flowing 250 bbls. daily.

The Texas Co.'s No. 26 House, Mary Owens Sur., 100 ft. W of No. 20 .....Drlg. sand and shale 3,682 ft.

E. M. Wilson's No. 16 W. & P.-Texas fee, 50 ft. E line, 40 ft. from N line of Blk. 23, J. B. Stevenson Sur...Rig.

E. M. Wilson's No. 1 Wheeler & Pickens, Blk. 21, J. B. Stevenson Sur. .....Shale and lime 1,265 ft.

MYKAWA—HARRIS COUNTY

Crown-Framer Oil Co.'s No. 1 Sladous (W.O.), Wm. Lovett Sur., 150 ft. from S line, 350 ft. from E line of tract .....T.D. 5,900 ft.; trying to sidetrack.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Production Co.'s No. 35 Taylor, Hamilton Sur. No. 52, 50 ft. S of No. 1 .....Set 1 jt. screen 3,877 ft.; tested S.W.; deepened to 3,970 ft.; reset 1 jt. screen.

Moody Corp. and Pure Oil Co.'s No. 1 Herman (W.O.), J. Kopman Sur., 200 ft. due W of C of E line of 25-acre tract .....Coring sandy shale 4,833 ft.

Rio Bravo Oil Co.'s No. 21-A Settegast (D.D.), J. Kopman Sur., 400 ft. S and 200 ft. E of NE cor. "A" lease .....Drlg. sidetracked hole in sandy shale 4,151 ft.

S. B. Ward's No. 1 Mowery, J. Hamilton Sur. No. 53, 300 ft. from W line, 60 ft. from N line of 24-ac. tr...No report.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 1 Davis (D.D.), 50 ft. out of SE cor. of David Kokernut Sur. .....Pulling screen 2,314 ft.

Cranfill-Reynolds Co.'s No. 1 Moore's Bluff (D.D.), 50 ft. out of NE cor. of M. Duncan .....To deepen.

Cranfill-Reynolds Co.'s No. 5 Davis (D.D.), Kokernut Sur., 150 ft. from S line, 1,197 ft. from E line of tract .....No report.

Cranfill & Reynolds' No. 5 Esperson (W.O.), M. Duncan Sur., 100 ft. N line and 300 ft. E line .....T.D. 6,711 ft.; cmtd. hole 5,455 ft.

Cranfill-Reynolds Co.'s No. 9 Moore's Bluff, M. Duncan Sur., 500 ft. S of N line of Moore's Bluff tract in line with No. 6 Davis and No. 6 Moore's Bluff .....Location.

HULL—LIBERTY COUNTY

Aberoil Co., Inc.'s No. 1 fee, Jesse DeVore Sur., 700 ft. from E line and 64 ft. from N line .....Derrick.

Eclipse Oil Co., No. 2 Barrow, Jesse Devore Sur., 55 ft. W, 35 ft. S of most easterly NE cor. 3.7-ac. tract....T.D. 4,960 ft.; sand 4,872-4,920 ft.; fishing swab.

Eclipse Oil Co.'s No. 1 Knox-Nelson-Layton, Jesse DeVore Sur., 30 ft. from N line and midway E and W of ½-acre tract .....Derrick.

Hannah Oil Co.'s No. 1 Hannah, Jesse DeVore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah .....Drlg. shale 964 ft.

D. & L. Prod. Co. and Bashara Oil Co.'s No. 1 Pevito, Jesse Devore Sur., 34½ ft. from E line and 30 ft. from N line of 5-acre strip .....Set 333 ft. of 4½-in. screen 4,687 ft. and 2½-in. tubing; comp. flowing 250 bbls.

D. & L. Prod. Co.'s No. 2 Mecom & Layton, Jesse DeVore Sur., 80 ft. from S line, 60 ft. from W line of 3-ac. tr. .....Derrick.

Gulf Coast Development Co.'s (Healey & Southerland) No. 1 Findley, Jesse DeVore Sur., 50 ft. from E line and 100 ft. from N line of 4-ac. tr. .....Sand 1,905-35 ft.; cmtd. 6⅝-in. csg. 1,900 ft.

Houston Prod. Co.'s No. 1 Baldwin, Jesse DeVore Sur., 222 ft. from S line and 50 ft. from E line of 5-acre tract .....Sandy shale 4,225 ft.

Republic Prod. Co.'s No. 91 Dolbear (D.D.), Jesse DeVore Sur. .....Pulling screen to deepen.

Republic Prod. Co.'s No. 146 Dolbear, Jesse DeVore Sur., midway between and in line with Nos. 18 and 86 ..Sand showing oil 2,507 ft.; comp. flowing 100 bbls., ¾-in. choke.

MARKHAM—MATAGORDA COUNTY

Rycade Oil Corp.'s No. 4 Meyers, 250 ft. from S line and 125 ft. from E line of SW, Blk. 1, William Hadden Sur. .....Drlg. gumbo 2,493 ft.

ORANGE—ORANGE COUNTY

Sun Oil Co.'s No. 1 Bellle (D.D.) .....No report.

REFUGIO—REFUGIO COUNTY

R. M. Jones' No. 1-B Mitchell (D.D.), 250 ft. NW of SE line and 250 ft. SW of Mission River .....T.D. 9,124 ft.; cmtd. 1 string 5⅜-in. csg. and 100 ft. screen; drld. plug and flowed fresh water; plugged back 15 ft.

Larco Gas Co.'s No. 5 Strauch, Refugio Town tract, Lot 6, Blk. 2, 100 ft. W of No. 2 .....Shut down awaiting orders.

CLAY CREEK—WASHINGTON COUNTY

Nicholson Oil Corp.'s No. 1 Bimage, C of E½ of J. F. Perry Sur., 200 ft. from W line and 1,300 ft. from S line of 242-ac. tract .....Shut down 1,600 ft.

John Walker et al's No. 1 Henry Wendt, J. F. Perry Sur., 150 ft. from SW line and 495 ft. from SE line of tract .....Abnd. 2,585 ft.

SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Reliable Oil Co.'s No. 1 Haber, 50 ft. N and 50 ft. W of SE cor., Lot 4, Blk. 12, Sec. 46-9s-2w .....Sand and shale 1,909-27 ft.; pumped S.W.; shut down.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 2 Waite, 330 ft. out of NE cor. SE, Sec. 12-9s-7w .....Drlg. shale 5,370 ft.

EDWERLY—CALCASIEU PARISH

C. M. Crotty Oil Co.'s No. 7 Lillard (W.O.) .....Set whipstock 2,824 ft.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 9 Bordages (W.O.), 319 ft. N and 90 ft. E of SW cor. of NW NE Sec. 8-10s-9w ...T.D. 6,900 ft.; to plug back to 6,700 ft.

Magnolia Pet. Co.'s No. 4 Frieberg & Wolf (W.O.) .....Set 1 jt. of 4½-in. screen 3,392 ft.; comp. flowing 400 bbls., 36 per cent water.

Union Sulphur Co.'s No. 3 Martha Moss, 300 ft. W, 150 ft. S, NE cor. NW SE, Sec. 8-10s-9w.....Cleaned hole 5,300 ft.; resuming drilling.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 750 fee (D.D.), Sec. 29-9s-10w....Pulled screen to deepen 3,353 ft.

Union Sulphur Co.'s No. 769 fee, 295 ft. S, 918 ft. W of C of Sec. 29-9s-10w .....Salt 6,053 ft.; sidetracked 3,242 ft. to sand 4,886-96 ft.; set screen.

Union Sulphur Co.'s No. 770 fee, 292 ft. S, 1,243 ft. W of center, Sec. 29-9s-10w .....Location.

Union Sulphur Co.'s No. 772 fee, 145 ft. S, 882 ft. W of center, Sec. 29-9s-10w .....Drlg. sand and shale 945 ft.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 6 Gray, Sec. 33-10s-12w, 160 ft. W of No. 3 .....Drlg. gumbo 2,195 ft.

Marrs McLean's No. 14 Gray, Sec. 33-10s-12w, 88 ft. W and 30 ft. S of No. 4 .....Rig.

Vinton Pet. Co.'s No. 5 Matilda Gray (D.D.), 450 ft. W, 362 ft. N, SE cor. SW NE, Sec. 33-10s-12w.....T.D. 3,667 ft.; to sidetrack stuck drill stem.

Calcasieu Oil Co.'s No. 3 Unsurveyed Island, 3,419 ft. N and 992 ft. E of SW cor. of Lot 9 of Secs. 37, 38 and 39 in Sec. 24-12s-10w .....Drlg. 1,200 ft.

Oil and Gas Pool Map

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Calcasieu Oil Co.'s No. 35 Watkins, 4,094 ft. N and 1,739 ft. E of SW cor. of Lot 9, Secs. 37, 38 and 39, in Sec. 24-12s-10w ..... Rig.

HACKBERRY—CAMERON PARISH

Lackawanna Oil Co.'s No. 1 Ellender, 320 ft. S and 150 ft. E of NW cor. of SE SE of Sec. 21-12s-10w ..... Rig.

Moon Oil Co.'s (R. E. Seiss') No. 1 Breaux, 1,200 ft. N, 150 ft. E of NW cor. of 61-ac. tr., Blk. 26, Sec. 46-12s-10w ..... Abnd. 4,275 ft.

Moon Oil Co.'s No. 6 Sanner, 1,550 ft. N and 675 ft. E of SW cor. of Sec. 28-12s-10w ..... Derrick.

Pop Oil Co.'s No. 1 Ellender, 617 ft. N and 931 ft. W of SE cor. NE, Sec. 19-12s-10w ..... Drlg. 2,630 ft.

J. D. Sutton's No. 7 Irwin, 1,320 ft. N and 1,490 ft. W of SE cor. of Sec. 13-12s-10w ..... Drlg. crystallized lime 3,256 ft.; cmtd. csg.

The Texas Co.'s No. 9 State, 2,229 ft. N, 918 ft. E from SE cor. Sec. 13-12s-10w, in 12s-9w ..... Abnd in rock 3,549 ft.

The Texas Co.'s No. 10 State, 2,375 ft. N, 564 ft. E, SE cor. Sec. 13-12s-10w, in Twp. 12s-9w ..... Location.

Union Sulphur Co.'s No. 1 Gulf land (Pure Oil Co. lease), 1,955 ft. N, 400 ft. W of SE cor., Sec. 11-12s-10w ..... Sand showing oil 8,316-24 ft.; fishing drill pipe.

Yount Lee Oil Co.'s No. 11 School land, 2,810 ft. W and 1,608 ft. N, SE cor., Sec. 15-12s-10w ..... Sand showing oil 3,795 ft.; cmtd. 7-in. csg. 3,785 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Ref. Co.'s No. 2 Wilson & Cockran, Sec. 4-6s-5e, 600 ft. N of No. 1 ..... Spudded.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 21 United Land Co., 3,083 ft. E and 690 ft. N of SW cor. of Sec. 15-10s-4e ..... Sandy shale 1,660 ft.; cmtd. 7-in. csg. at 1,650 ft.

STARKS—CALCASIEU PARISH

Emerson & Starks' No. 1 Industrial, 385 ft. S and 275 ft. E of NW cor. of SW NE of Sec. 30-9s-12w ..... Drlg. gumbo 510 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 12-12s-8w, 800 ft. S 66 deg. 42 min. from No. 9 ..... Location.

LEESVILLE—LA FOURCHE PARISH

The Texas Co.'s No. 5 L.L.&E., 2,888 ft. S, 105 ft. E of NW cor. of Sec. 26-21s-22e ..... Oil sand 3,653-63 ft.; set 49 ft. of 4½-in. screen; comp. flowing 1,300 bbls. P.L. oil, ½-in. choke, 469 lbs. pressure; flowed only short time; now dead.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Great Southern Oil Co.'s No. 1 Schevojsa, 329 ft. N, 78° E of N cor. B. Dottery Sur. ..... Sandy shale 2,687 ft.

BRAZORIA COUNTY

John Deering's No. 1 C. W. Chapman, 394 ft. from S line and 104 ft. from E line of Lot 2, Andrew Robinson Sur. ..... No report.

J. R. Ingram's No. 2 Levitt, John Peske Sur., 75 ft. NW of No. 1 ..... Standing 2,185 ft.

Shell Pet. Corp.'s No. 5 Blakely-Winston, Danbury, 1,410 ft. N 63° and 1,200 ft. N 27° W of SW cor. of H.T.&B. Sur. No. 14 ..... Rig.

The Texas Company's No. 3 Belcher, Manvel, Harvey N. Little Sur., 1,220 ft. southwesterly and 200 ft. southeasterly out of N cor. of Belcher lease ..... Drlg. hard shale and lime 2,742 ft.

BURLESON COUNTY

Ball & Knob's No. 1 Polansky, M. B. Lawrence Sur., 359 ft. from E line and 469 ft. from N line of 158-ac. tr. ..... Shut down 650 ft.

E. M. Bracey et al's No. 1 Bracey, J. Lastly Sur., 330 ft. from E cor. of P. Taylor 110 acres, SE along NE line of J. G. Houston 160 acres, thence 130 ft. at right angles in 3-acre tract ..... No report.

Marek & Son's No. 3 A. Marek, N. McFaddin Sur., 1,068 ft. N and 225 ft. W of SE cor. of tract ..... Standing 2,210 ft.

Sampson Oil & Gas Co.'s No. 1 Duckworth & Gilley, 100 ft. from S line and 100 ft. from W line of Blk. 8, P. Singleton Sur. ..... Abnd. 2,648 ft.

J. E. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 31 ft. SW and 4,340 ft. SE of S cor. of Joseph Henson Sur. ..... Gumbo 600 ft.; standing.

COLORADO COUNTY

Bunte and Shell Pet. Corp.'s No. 1 Rudolph Matuska, Joshua Rennicke Sur., 700 ft. S of most northerly NW cor. in C E and W of 130-acre tract ..... Rig.

Smith, Adair et al's No. 1 Barnett, 230 ft. from W line and 330 ft. from S line of Blk. 26, Q. K. Winn Sur. ..... Black shale 4,345 ft.; standing.

FORT BEND COUNTY

Naylor & DeCosta's No. 1 Naylor, 6,350 ft. N, 55 deg. E from SW cor. 653-acre tract in Christman Sur. ..... Drlg. 4,510 ft.

North Star Pet. Co.'s No. 1 Guyler, Andrew Roberts Sur., 330 ft. out of SW cor. of 100-acre tract ..... Derrick.

Stone & Wyman's No. 1 Beard, H.&T.C. Sur. No. 118, 1,150 ft. from NW line, 1,892 ft. from NE line ..... No report.

GALVESTON COUNTY

Humble Oil & Ref. Co.'s No. 1 Rosenkranz, Green's Bayou, center N half of Lot 10, Sarah White Sur. ..... Location.

H. H. Stevenson's No. 1 Lobit, J. F. Perry and E. M. Austin Sur., 250 ft. N of Dickinson Bayou, and 250 ft. W of E line of E. Lobit 22-ac. tr. ..... Shut down 600 ft.

GRIMES COUNTY

Barnett et al's No. 1 Dodd, Timothy Jones Sur. ..... Shut down 2,215 ft.

HARDIN COUNTY

W. R. Alexander et al's No. 1 Southwestern Lbr. Co., 150 varas W of C of E line of Mary K. Sherman Sur. Drlg. sand and lime 1,525 ft.

Houston Oil Co. and Republic Prod. Co.'s No. 1 Ariola fee, 3,660 ft. from N line and 9,700 ft. from E line of Ariola Sur. ..... Sandy shale showing oil 2,315-25 ft.; to test.

Joe E. Proctor's No. 1 Russell & Teagle, 2,650 ft. E and 2,777 ft. N of NW cor. of Wm. W. Young Sur. ..... Shut down 1,972 ft.

HARRIS COUNTY

Bayou Oil Co.'s No. 1 Hall, 350 ft. from N line and 970 ft. from E line of Wm. Hedge Sur. ..... Derrick.

T. V. Buckholve & Sons' No. 1 Miller, Arthur McCormick Sur. ..... Recovered stuck drill stem 547 ft.; to resume drilling.

John Deering's No. 1 Warren, Hockley T. Snell Sur., 100 ft. due south of The Texas Co.'s No. 3 Warren ..... Shut down 2,105 ft.

H. D. Morse et al's No. 1 Schiveinle, Wm. White Sur., 900 ft. S 80° W of NW cor. of Lienberger 20-ac. tract in Blk. 1 ..... Drlg. shale 3,661 ft.

Victor Smith's No. 1 Dr. Griffith, S. Bell Sur., 582 ft. from E line and 60 ft. from N line of 250-acre tract ..... Standing 225 ft.

JASPER COUNTY

Hext Drlg. Co.'s No. 1 Flourney, B. F. Jones Sur., 900 ft. NW of Helmerich & Payne's No. 1 Flourney ..... Shut down 4,521 ft.

Rio Neches Oil Co.'s No. 4-A Boykin, M. Rackie Sur., 400 ft. E of No. 3-A ..... Spudded.

JEFFERSON COUNTY

Coast Oil & Gas Co.'s No. 1 Young, Joseph Grigsby Sur., 250 ft. from E line and 160 ft. from S line of 40-acre tract in Block F-5, Lot 6 ..... Rig.

Elam & Pipkin's No. 2 Broussard, John McGaffey Sur., 150 ft. due E of No. 1 ..... Shut down 1,855 ft.

LIBERTY COUNTY

Leon Brisley's No. 1 J. M. Neal, Edward Tanner Sur., 1,800 ft. E, 1,300 ft. N of most westerly NW cor. of Margaret Evans Sur. ..... Drlg. sandy shale 1,516 ft.

Mayes et al's No. 1 Dunman, J. C. Martin Sur., 1,111 ft. from S line of survey and 2,360 ft. W of Trinity River ..... Rig.

MATAGORDA COUNTY

Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 3,000 ft. E from SW cor. of Seth Ingram Sur. ..... T.D. 2,720 ft.; cmtd. string of combination 6 and 4-in. csg. 2,700 ft.

Shepherd's Mott Salt Dome Oil Co.'s No. 1 Hawkins, Shepherd's Mott, 5,268 ft. from N line and 1,320 ft. from E line of B. McCarthy Sur. ..... Drlg. sticky shale 4,307 ft.

United North & South Oil Co.'s No. 1 Stoddard, J. C. Keller Sur., 150 ft. W and 545 ft. N of SE cor. Blk. 53, Buckeye Townsite ..... T.D. 7,838 ft.; sidetracking 7,793 ft.

MONTGOMERY COUNTY

Alpha Oil Co.'s No. 1 South Tex. Dev. Co., center of Blk. 47, in southeast Alex McCown Sur. ..... Set 32 ft. of 4¾-in. screen 5,158 ft. and 2½-in. tubing at 5,151 ft.; comp. flowing 118 bbls. hourly, ⅝-in. choke.

Craft & Gesieke's No. 2 South Tex. Dev. Co., center T.&N.O. Sur., Blk. 5 ..... Location.

Craft & Gesieke's No. 1 South Tex. Dev. Co., T.&N.O. Sur., Blk. 9 ..... Shut down 4,996 ft.

Gohlson Bros. and Rycade Oil Corp.'s No. 1 Drought, 3,340 ft. along N line of Kronkrite Sur., from NE cor., thence 250 ft. S at right angles ..... Shut down waiting orders 4,002 ft.

Hamilton et al's No. 1 Gilbert, John Davis Sur., 256 ft. from W line and 465 ft. from S line of 46-acre tract.. Drlg. shale 2,107 ft.

Heep Oil Corp.'s No. 1 Brent, D. W. Collins Sur., 330 ft. from S line in center east and west of 209-ac. tr.. T.D. 5,254 ft. in S.W. sand; plugged back to 5,010 ft.; cmtd. 7-in. csg. 4,970 ft.

Heep Oil Corp.'s No. 2 Cartwright Sur., John Davis Sur., 330 ft. from S line, 400 ft. from E line of tr... Sand showing oil 5,127-41 ft.; running casing.

Houston Oil Co.'s No. 1 Hamman, Charles B. Stewart Sur., 450 ft. from N and W line of 232.5-ac. tr. .... Set 24 ft. of 5 3/16-in. (O.D.) screen 5,129 ft. and 2⅜-in. (O.D.) tubing 90 ft. off bottom; washing.

Humble Oil & Ref. Co.'s No. 1 C. L. Dobbins, Ransom House Sur., 425 ft. from N line and 466 ft. from W line of tract ..... Drlg. shale 2,934 ft.

Humble Oil & Ref. Co.'s No. 4 South Tex. Dev. Co., 1,900 ft. N from SE cor. of T. C. Howell Sur., thence 466 ft. W at right angles ..... Drlg. sticky shale 1,870 ft.

Humble Oil & Ref. Co.'s No. 1 Cartwright, John Davis Sur., 330 ft. from N line, 466 ft. from E line of 248.9-ac. tract ..... Spudded.

Lilly and Red Moon Oil Co.'s No. 1 Stella McDonald, John Davis Sur., 241½ ft. from E line, 202.8 ft. from S line of 5-ac. tract ..... Rig.

Lowrie & Young's No. 1 C. A. Damuth, approx. 5,430 ft. from E line and 3,018 ft. from S line of T. J. Nichols Sur. ..... Cmtd. 12½-in. csg. 465 ft.

Miller Prod. Co.'s No. 1 Foster Lbr. Co., M. B. Lawrence Sur., 2,640 ft. from N line and 300 ft. from E line of 412-acre tract ..... Location.

Moore et al's No. 1 Burton, I.&G.N. Sur., 466 ft. out of NE cor. 46-acre tract ..... Drlg. shale 2,112 ft.

Pevehouse Oil Co.'s No. 1 Sealey, Jas. Pevehouse Sur., 1,575 ft. N of N line of Horton & Woodson's 1,562-acre tract and 2,226 ft. E of W line of H.&W. 1,870-acre tract ..... **Shut down 3,984 ft.**

Plummer & McDaniel's No. 1 South Tex. Dev. Co., Theo. Slade Sur., 330 ft. from S and E lines of 60-ac. lease, in Lot 103 ..... Sand showing oil 5,132-49 ft.; cmtd. 7-in. csg. 5,110 ft.

Rowe & Flowers' No. 1 Varner, R. House Sur., 330 ft. out of NE cor. of 33-ac. tr. ..... Coring sandy shale 5,010 ft.

Rowe & Flowers' No. 1 Alexander, 330 ft. out of SE cor. Lot 20 in the NW A. McCown Sur. ..... D.S. test 5,063-5,119 ft. showed small amount of gas, oil and S.W.; coring deeper.

C. C. Steinberger et al's No. 1 Steinberger, John Davis Sur., 450 ft. from N and W lines of the 250-ac. tract.. Drlg. shale 4,155 ft.

Strake Oil Corp.'s No. 3 South Tex. Dev. Co., 2,475 ft. from W line and 790 ft. from S line of Theo. Slade Sur. ..... T.D. 5,111 ft.; sidetracked at 2,370 ft. and drlg. sandy shale 3,140 ft.

R. H. Vice's No. 1 S. L. Ross, Jose Maria De La Garza Sur., 1,777 ft. N and 344 ft. E of SW cor. 97-acre tract ..... Drlg. shale 1,582 ft.

NEWTON COUNTY

L. A. James et al's No. 1 Price, T.&N.O. Sur., 1,000 ft. from W line and 500 ft. from N line of tract ..... No report.

Sun Oil Co.'s No. 1 Peevey Moore Lbr. Co., 2,145 ft. from S line and 1,225 ft. from W line of F. Stoevar Sur. No. 4 ..... Rig.

ORANGE COUNTY

Altex Oil Co.'s (Veteran Oil Co.) No. 1 Read, A. Nelson Sur. No. 1, 500 ft. from N line and 250 ft. from E line of tract ..... Set 10-ft. blank and 15 ft. of 4½-in. screen 4,808 ft.; tested salt water; shut down.

POLK COUNTY

Anderson et al's No. 1 Duke, Peter J. Manard Sur., 330 ft. out of NW cor. of 235-acre tract ..... Rigging up.

Coch & Stevens' No. 1 Ruth Lawrence, Castilian Sur., 300 ft. from W line and 790 ft. from S line of 54-acre tract ..... Drlg. 1,200 ft.

W. H. Freeman's No. 2 Freeman, A. Viesca Sur. ..... Drlg. shale 3,300 ft.

Tony & Purdy's No. 1 Martha Roberts, Joaquin T. De Rumayor Sur. ..... Spudded.

REFUGIO COUNTY

Gulf Prod. Co.'s No. 1 J. O'Connor, C.E.P.I.&M. Sur., 1,200 ft. from S line and 1,500 varas from E line of tract ..... No report.

Humble Oil & Ref. Co.'s No. 1 O'Connor (D.D.), 6,012 ft. S from NE cor. along SE line of Lon T. Rios Sur., thence 7,375 ft. W at right angles in John Keating Sur. ..... Drlg. hard, sandy shale 5,844 ft.

Humble Oil & Ref. Co.'s No. 2 O'Connor, John Keating Sur., 12,625 ft. N of S line at right angles and 8,158 ft. W of E line at right angles ..... Shut down 5,748 ft.

TRINITY COUNTY

C. N. Beckner's No. 1 Mangum, J. A. Henderson Sur., 200 ft. out of NE cor. 80-acre tract ..... Shut down 1,374 ft.

Joseph M. Weaver's No. 1 Thompson, 150 ft. out of NE cor. of I.&G.N. Sur., No. 47 ..... S.D. 3,556 ft.

VICTORIA COUNTY

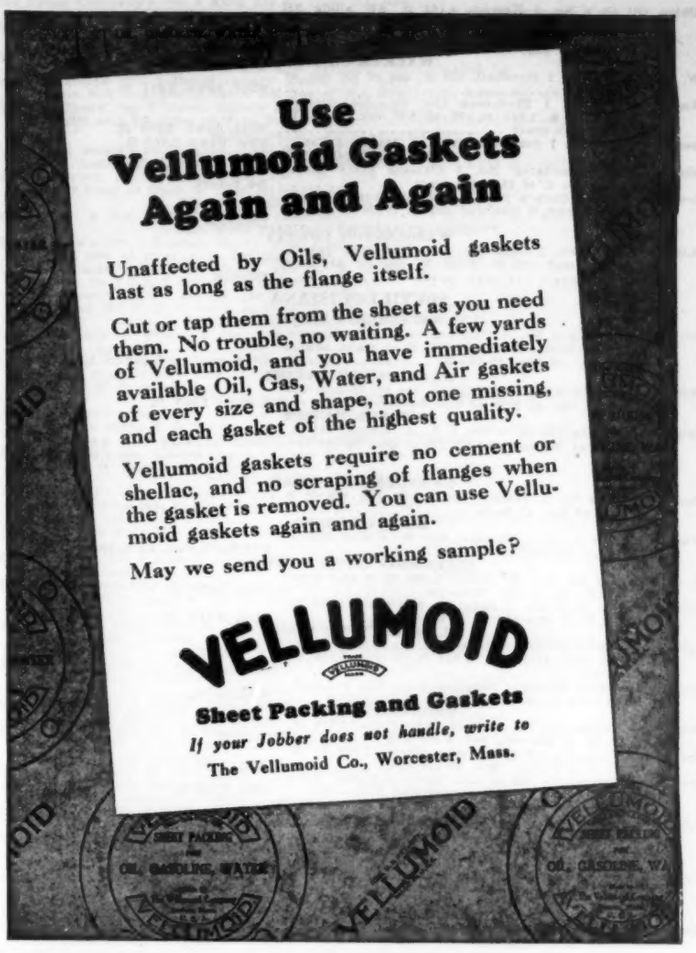
Bunte et al's No. 2 Keeran, Martin DeLeon Sur., 200 ft. E of No. 1 ..... Coring sand showing oil 5,842 ft.; top of sand 5,831 ft.

Cullen & West's No. 1 Keeran ranch, Martin DeLeon Sur., 450 ft. from S line, 450 ft. from W line of tr.. Coring sandy shale 6,412 ft.

Houston Oil Co.'s No. 1-A McFaddin, 200 ft. from NE line, 240 ft. from SE line of I.R.R. Sur. No. 20 ..... T.D. 5,292 ft.; plugged to 1,673 ft.

Humble Oil & Ref. Co.'s No. 1 Pete Rydolph, John Kemper Sur., 2,617 ft. from E line and 1,013 ft. from W line of lease ..... Drlg. shale 3,034 ft.

The Texas Company's No. 3 McFaddin (W.O.), S 15° W 6,200 ft., N 75° W 1,850 ft. from NE cor. John M. Rine Sur. ..... Rigging up to work over 5,835 ft.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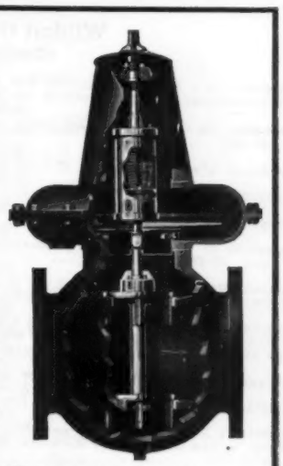
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Union Oil Co.'s No. 1 Keeran, 4,166 ft. SW along SE line of Gulf Prod. Co.'s 3,500-ac. lease from most easterly cor., thence 1,390 ft. SE at right angles in Martin DeLeon Sur. ..... Drlg. hard sandy lime 5,035 ft.

WALKER COUNTY

W. E. Brown's No. 1 Horshall, 150 ft. out of SE cor. of E. Miller Sur. ..... Shut down 2,011 ft.
Hart Oil Co.'s No. 1 Thompson Lbr. Co., Jose Ortega Sur., 1,565 ft. S, 1,876 ft. W of SW cor. of J. B. Gibson's 71-acre tract ..... Shut down 2,090 ft.
Geo. F. Kerr's No. 1 Smithers Bros. S. Manning Sur..... Shut down 3,650 ft.

WALLER COUNTY

McDaniel and associates' No. 1 Citizens State Bank, B.B.B.&C. Sur., C of 150-acre tract ..... No report.
Seven Wells Oil Corp.'s No. 1 Maxwell, Justo Liendo Sur., 225 ft. from N line and 492 ft. from W line of 36-acre tract ..... Location.

WASHINGTON COUNTY

M.O.&T. Corp.'s No. 1 Giddings, S. Young Sur., 200 ft. from S line and 150 ft. from W line of 696-acre tract ..... Derrick.

SOUTH LOUISIANA

ASCENSION PARISH

Rio Bravo Oil Co.'s No. 1 Community Lease, Darrow, 200 ft. from N line and 1,500 ft. E at right angles from SW cor. of Sec. 15-10s-2e ..... Drlg. sand and gravel 1,505 ft.

BEAUREGARD PARISH

DeRidder Dev. Co.'s No. 1 McMahon, 200 ft. W and 156 ft. S of NE cor. of NW of Sec. 33-3s-9w ..... Gumbo 1,200 ft.

CAMERON PARISH

Brownie-Babbette Oil Co.'s No. 1 R. A. Moore, 562 ft. W, 50 ft. S of NE cor. E half SE of Sec. 18-12s-12w.. Sand showing oil 6,619-22 ft.; cmtd. 6⅝-in. csg.; twisted off drill stem; abnd.

EVANGELINE PARISH

Emile LeDeau's No. 1 Vidrine, 200 ft. W and 350 ft. S of NE cor. of Sec. 47-3s-3e ..... Shut down 1,420 ft.

IBERIA PARISH

Warrick Oil Co.'s No. 1 Bernard, 912 ft. N and 150 ft. E of SW cor. of Sec. 54-13s-7e ..... Pulling screen to deepen.

JEFFERSON DAVIS PARISH

D. C. Gillette's No. 1 J. A. Jester, 2,467 ft. S and 1,800 ft. W of NE cor. of Sec. 27-8s-3w ..... Drlg. 2,850 ft.
Little City Oil Co.'s No. 1 Jennings Norwood, 1,975 ft. N and 675 ft. E of SW cor. of Sec. 44-9s-3w ..... Drlg. 2,275 ft.

PLAQUEMINES PARISH

Lake Washington-Freeport Sulphur Co.'s No. 2 Cockrell-Moran, Sec. 14-20-26e, 1,218 ft. N and 4,396 ft. E of station ..... Sulphur test.
Lake Washington-Freeport Sulphur Co.'s No. 1 Louisiana State, 598 ft. N and 1,229 ft. E of station ..... Sulphur test.

TERREBONNE PARISH

The Texas Company's No. 7 State-Lake Pelto, 2,216 ft. N, 164 ft. W of SE cor., Sec. 8-23s-18e ..... Derrick.
The Texas Co.'s No. 16 State-Lake Barre, 1,500 ft. S, 150 ft. E of NW cor., Sec. 30-21s-19e ..... Drlg. 1,135 ft.
The Texas Company's No. 3 Lake Barre-L.L.&E., 3,520 ft. S and 110 ft. E of NW cor. of Sec. 30-21s-20e .... Drlg. 2,000 ft.

VERMILLION PARISH

Pure Oil Co.'s No. 1 Mulvey Irrigation (Gueydan), 1,170.9 ft. from N line and 2,252.5 ft. from W line of Sec. 34-11s-1w ..... Drlg. coarse sand 3,510 ft.

VERNON PARISH

Minerals Division Llano Co.'s No. 1 Llano Del Rio, 543 ft. E and 300 ft. S of NW cor. of NW of Sec. 34-3n-9w ..... No report.

WEST FELICIANA PARISH

Putnam Synd.'s No. 3 Como Plantation, Sec. 51-1s-14w Shut down 2,449 ft.

Wildcat Operations in Kansas

(Continued from Page 48)

Sidwell et al's No. 1 Nichols, NE NW NW Sec. 28-17-1n. S.D. 580 ft.
Simmons-Canary's No. 1 Krehbiel, SE NW Sec. 23-18-1w. Drlg. 3,099 ft.

MORTON COUNTY

Hydraulic Oil Co.'s No. 1 State Land, NW SE, Sec. 22, 34-43w ..... T.D. 3,640 ft.; temp. abd.

MORRIS COUNTY

Urschel et al's No. 1 Bersuch, NW NE NW. Sec. 10-17-7.. S.D. 915 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w ..... Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW, Sec. 21-14-15.... S.O. 2,190-2,200 ft.; temp. abnd.

PRATT COUNTY

Minnescah O. & G. Co.'s No. 1 Harlesty, SW SE SE, Sec. 28-27-11w ..... Drlg. 1,095 ft.

RENO COUNTY

National Union's No. 1 Hill, NE SE Sec. 18-24-4w..... Location.
Martin et al's No. 1 Yadu, C NW NW, Sec. 15-24-5w.... S.D. 318 ft.

RICE COUNTY

Langston et al's No. 1 Wells, NE SE Sec. 4-20-9w ..... Rig.
R. Ramsey's No. 1 Hutton, SW NE SW Sec. 6-20-9w.... T.D. 3,323 ft.; water; abnd.
Slick et al's No. 1 Arth, SE NE Sec. 27-18-10w..... Drlg. 3,241-43 ft.; show oil; W.O.C.S.
J. Liggett et al's No. 1 Thodel, C NW NW, Sec. 11-21-7w. S.D. 50 ft.

RUSSELL COUNTY

J. Brennan's No. 1 Waly, CML E½ NW, Sec. 29-13-11w. Rig.

RUSH COUNTY

Barnsdall's No. 1 Schultz, SW cor. Sec. 3-19-16w ..... Rig.
Skelton et al's No. 1 Brock-Hartman, SW SE NE, Sec. 4-18-16w ..... S.D. 50 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Weis, C W½ NE NW, Sec. 20-13-4w ..... S.D. 3,401 ft.

SEDGWICK COUNTY

Scroggins et al's No. 1 Bartlett, NW SE NW Sec. 35-27-1 ..... Drlg. 585 ft.

SHERIDAN COUNTY

Pio et al's No. 1 Shoemaker, SE SW, Sec. 27-7-26w .... H.F.W. 4,535-45 ft.; S.D.

STEVENS COUNTY

Argus Prod.'s No. 2 Christopher, C NE, Sec. 10-33-39w.. S.D. 5,521 ft.

SUMNER COUNTY

Austin et al's No. 1 Fog, SW SE SE Sec. 14-34-1w ..... Rig.
Treco Oil Co.'s No. 1 Tompkins, SW, Sec. 36-33-1..... Location.
Treco Oil Co. and Shell's No. 1 Springate, NE SE SW, Sec. 6-34-2 ..... S.D. 3,630 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 61)

GUADALUPE COUNTY

John F. Camp's No. 1 Delaney, 2,572 ft. from S line, 1,515 ft. from W line of Delaney 400-acre tract in Jesus Cantu Sur. ..... T.D. 2,257 ft.; drlg.

GOLIAD COUNTY

Hoffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,200 ft. from W line of Peter B. Dexter Sur. ..... T.D. 2,476 ft.; standing.
Humble Oil & Ref. Co.'s No. 1 Fromme, 450 ft. from S line, 150 ft. from W line of lease on Geo. Kersey Sur.. T.D. 5,245 ft.; abnd.
Plymouth Oil Co.'s No. 2 Parks, 400 ft. S of No. 1 Parks in Solomon Parks Sur. ..... T.D. 5,240 ft.; drlg.

Neal et al's No. 1 J. M. Pettus, 10,700 ft. to S line, 2,500 ft. to E line of Pedro Trevino Sur. ..... T.D. 5,070 ft.; to drill deeper.

GONZALES COUNTY

Johnson & Mattock's No. 1 J. James, 12 miles NE of Gonzales city, 900 varas from E line, 300 ft. from S line of tract in M. A. Williams Sur. ..... T.D. 3,200 ft.; drlg. starts.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,590 ft.; shut down.
San Roman Oil Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. ..... T.D. 675 ft.; S.D.
Dayle L. Smith's No. 3 Daskam, SW part of county.... T.D. 1,726 ft.; S.D.

JIM HOGG COUNTY

Clark & Cowden's No. 1 E. Vela, Share 1 El Peyote grant. Rigging up.
D. C. DeWitt's No. 1 Gomez, 1,140 ft. from N line, 150 ft. from W line of Sur. No. 12, SW part of county .. T.D. 1,457 ft.; to drill deeper.
Randado Syndicate's No. 1 Randado townsite, Sur. No. 148 ..... T.D. 2,503 ft.; standing.

JIM WELLS COUNTY

Catlett & O'Neal's No. 2 H. D. Miller, 2,200 ft. N and 53 deg. E of most southwesterly cor. of ranch ..... Rigging up.
F. A. Lain's No. 1 Vernon Porter, 800 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 ..... Rebuilding derrick.
Mid-States Oil & Gas Co.'s No. 1 Wade, C Blk. 3, Wade ranch, NE part of county ..... Location.

KARNES COUNTY

A. E. Edmiston's No. 1 O. L. Cochran, 150 ft. from S line, 500 ft. from E line of farm in D. B. McConnell Sur. ..... T.D. 2,014 ft.; drlg.
Ike Howeth et al's No. 1 D. Pargmann in Victor Blanco Sur., 660 ft. NE along county road from NE cor. of F. Heer tract, thence 50 ft. NW at right angles... T.D. 2,155 ft.; drlg.
Nichols Oil Co.'s No. 1 Newberry, 210 ft. S, 60 de. E from Fort Bend Oil Co.'s No. 1 Newberry ..... T.D. 3,300 ft.; S.D.
Pickett et al's No. 1 D. E. Lyons in Victor Blanco Sur..... T.D. 3,422 ft.; no report.

KERR COUNTY

Eastland Oil Co.'s No. 1 Love, 600 ft. E of No. 1 Love in J. Martinez Sur. No. 1,594 ..... T.D. 2,395 ft.; shutting out water.
Evans & Gant's No. 1 E. Young, A. E. Burg Sur. 28.... T.D. 1,312 ft.; standing.
Verde O. & G. Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,923, Hamilton Sur., 4 miles from Center Point; T.D. 200 ft; carried to this depth and abandoned as Herber Oil Co.'s No. 1 J. D. Witt ..... T.D. 110 ft.; standing.

LIVE OAK COUNTY

J. A. Harper's No. 1 fee, 3,130 ft. to N line, 510 ft. to E line of farm, J. Pointevant Sur. 37 ..... T.D. 592 ft.; S.D. for water.

LEE COUNTY

Paton Bros.' No. 1-A Turner, 24 ft. from No. 1 Turner... T.D. 5,280 ft.; drlg.

MEDINA COUNTY

James Earle Greenlee's No. 1 J. P. Nixon 150 ft. S of C of N line of S half of NW of M. Derungs Sur. No. 528 ..... Spudded in
Robertson Drilling Co.'s No. 1 Little, 2,350 ft. from N line, 1,560 ft. from E line of E. B. Rutledge Sur., southern part of county ..... T.D. 2,100 ft.; drlg.

MILAM COUNTY

M. W. Eiser's No. 1 Citizen's Nat. Bank of Waco, 1,325 ft. from S line, 625 ft. from E and W lines of tract in Wm. Punchard Sur. ..... Moving in rig.
Glass et al's No. 1 Ellison, 700 ft. from N line, 1,350 ft. from W line of 200-acre tract in Samuel Frost Sur.... T.D. 550 ft.; drlg.
Keyser & Nichols' No. 2 Irwin, 65 ft. from No. 1, Levi Taylor Sur. ..... Set csg. 590 ft.; S.D.
Keyser & Roberts' No. 3 Ward, 125 ft. NE of No. 2 Ward, in Levi Taylor Sur. ..... T.D. 1,315 ft.; S.D.
Michalk & Clark's No. 1 Johnson, 60 ft. S of No. 1 Johnson on 100-ac. lease in Juan Jose Acosta Sur. .. T.D. 1,952 ft.; drlg.

SAN PATRICIO COUNTY

John F. Camp's No. 1 W. W. Bennett, C SW of Sec. 8, Geo. H. Paul Subd., J. J. Welder ranch ..... T.D. 3,991 ft.; reaming.

STARR COUNTY

Coastal O. & G. Co.'s No. 1 Kelsey-Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86.. T.D. 800 ft.; set csg.
W. T. Gilman & Travelers Oil Co.'s No. 1 C. Ramos, 1,170 ft. from SW line, 1,470 ft. from NW lines of Sur. No. 150 ..... Spudded in and S.D.
H. C. Carter's No. 1 Gonzales, 990 ft. from N line, 1,150 ft. from E line of Share 62-B of Subd. of Porcions 70 and 71, Jurisdiction Mier ..... T.D. 340 ft.; standing
Frank LaBorde's No. 1 Juan Marroquin, 1,250 ft. from E line, 1,225 ft. from S line of Share 21 of W two-thirds of Porcion 75 ..... T.D. 620 ft.; standing
Lackawanna Oil Corp.'s No. 1 V. Guerra, 657 ft. from NE line, 763 ft. from SE line of Blk. 12, Subd. of 2,000-acre tract out of Porciones 55 and 56 ..... Location.
Smith et al's No. 1 Lopez, 200 ft. from E line, 1,000 ft. from S line of Blk. 20, Share 65 of Porcion 30, Jurisdiction Camargo ..... T.D. 190 ft.; standing.
George Stobaugh's No. 1 Seabury et al, 150 ft. from S and W lines of Porcion 107 ..... T.D. 230 ft.; set surface csg.
Stryalls Oil Corp.'s No. 1 M. E. Salinas, 155 ft. from N and W lines of lease in Porcion 50, Share 38 .... T.D. 2,384 ft.; abnd.
Stryals Oil Corp.'s No. 1 H. Garza, 590 ft. from E line, 5,280 ft. from N line of Share 24, Partition of Porcions 67-72 ..... Location.
Strayhorn Oil Co.'s No. 1 Caffarelli, Porcion 10, 150 ft. from N and E lines of Share 19-A ..... T.D. 360 ft.; abnd.
Stryalls No. Corp.'s No. 1 Margo, 150 ft. from N and E lines of Share 27 of Subd. of Porciones 80 and 81, Jurisdiction of Camargo ..... T.D. 210 ft.; standing.
E. L. Williams' No. 1 L. G. Madrigal, 150 ft. from N and W lines of Share 6-A of Porcion 72 of Jurisdiction of Mier ..... T.D. 332 ft.; drlg.

TRAVIS COUNTY

Fritz Fuchs' No. 1 Swedish, 2,350 ft. from NE line, 750 ft. from NW line of Thomas Smith Sur. ..... T.D. 1,598 ft.; S.D.
Ray & Orth's No. 1 Lundgren, 550 ft. from N line, 150 ft. from W line of 133-ac. tr. in L. Kimbro Sur. .... T.D. 550 ft.; fishing.

WEBB COUNTY

Blair & Livingston's No. 1 J. M. Garcia, 150 ft. from N and E lines of NE NW of Sur. 1,100 ..... Location.
O. W. Killam's No. 1 Smith, 664 ft. from NW line, 680 ft. from NE line of Blk. 6, Sur. 1,110 ..... T.D. 1,483 ft.; drlg. deeper.
Newton Drilling Co.'s No. 1 A. Garcia, 2,550 ft. from S line, 2,340 ft. from W line of Sur. No. 52, 3 miles SW of Carolina Texas Field ..... T.D. 130 ft.; drlg.
Norden & Morris' No. 2 Gates, 340 ft. from W line, 400 ft. from S line of Blk. 5, Sur. No. 19 ..... T.D. 1,090 ft.; drlg.
Thompkins et al's No. 1 Ortiz, 200 ft. from E line, 2,000 ft. from N line of Sur. No. 1,808 ..... T.D. 930 ft.; standing.

WILLIAMSON COUNTY

Burns et al's No. 1 E. G. Edge, 360 ft. from SE line, 267 ft. from SW line of 94-acre tract on Simon Miller Sur. ..... T.D. 850 ft.; drlg.
McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tr. in B. Manlove Sur. ..... T.D. 740 ft.; S.D.
McNeill & Matthews' No. 1 Bachmayer, 300 ft. from E line, 150 ft. from S line of C. C. Browning Sur. ... T.D. 2,000 ft.; standing.

WILSON COUNTY

A. M. Blume's No. 1-A Nicholson, 105 ft. N, 27 deg. E of No. 1 Johnson ..... Moving in rig.

ZAPATA COUNTY

Ballard & Mercer's No. 1 Flores, 500 ft. from NE line, 550 ft. from SE line of Blk. 27, Porcion 37 ..... T.D. 2,505 ft.; standing.
Joe Cullinan's No. 1 E. Gutierrez, 1,992 ft. from NE line, 2,303 ft. from SE line of Charco de la India grant ..... T.D. 1,495 ft.; drlg.

Deschoe et al's No. 1-A Garcia, 150 ft. from NE and SE lines of Blk. 7 of Subd. of 700 ac. of Share A, Charco Redondo grant ..... T.D. 390 ft.; drlg.
Huff & Fudge's No. 1 Uribe, 150 ft. from NW and SW lines of Blk. 8, Share 7, Partition 6, San Ignacio Subd. of Borrego grant ..... Rigging up.
Hunt & Polk's No. 1 H. Ramirez, 7,075 ft. N of S cor. and 2,918 ft. from W line of Share A of Villa grant .. T.D. 820 ft.; standing
T. J. Murray's No. 2 Haynes, 3,000 ft. from NE line, 7,091 ft. from NW line of Haynes Pasture, Comitas grant ..... T.D. 1,600 ft.; drlg.
F. J. Oesenbeck's No. 1 Adelfonso Ramerix, 600 ft. W of Zapata-Roma highway, 150 ft. from SE line of Porcion 18 ..... Location.
H. L. Sargent et al's No. 1 Antonio Gutierrez heirs, 922 ft from W line, 472 ft. from S line of Tract 2, Blk. 5, Nixon Subd., Porcion 19, San Ignacio Borrego grant ..... T.D. 920 ft.; drlg.
F. J. Searight's No. 1 F. Munoz, 660 ft. from N line and on line between Blocks 31 and 32 of Porcion 18 ..... T.D. 275 ft.; standing.

Southwest Texas Proven Areas

Week Ending July 29

NORMANNA POOL—BEE COUNTY

Gulf Coast Oil Co.'s No. 5 Hicks, 600 ft. E of Nichols Oil Co.'s No. 2 Hicks ..... Moving in.

COSDEN POOL—BEE COUNTY

Houston Oil Co.'s No. 4 Newmann, 1,000 ft. from W line and 300 ft. from S line of tract in George A. Kerr Sur. ..... T.D. 3,688 ft.; comp. 40 bbls.
Coquat and Barnsdall Oil Co.'s No. 2 Roberts, 1,000 ft. from W line and 300 ft. from N line of tract in George A. Kerr Sur. ..... Moving in.

PETTUS POOL—BEE COUNTY

Gulf Coast Oil Co.'s No. 3 R. A. McKinney, 1,600 ft. from S line and 240 ft. from E line of tract in George Habbermacher Sur. ..... Rigging up.
Slick-Seeligson, Inc.'s No. 7 Ray, 400 ft. N of No. 6 Ray .. Rigging up.
The Texas Co.'s No. 6 Gremmell, 400 ft. N of No. 5 Gremmell ..... Rigging up.

TULETA POOL—BEE COUNTY

Coquat & Hawn's No. 1 Harris, 1,000 ft. SE of Nichols' No. 1 Harris ..... Moving in.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 180 ft. from N and E lines of tr. in A. Manachaca Sur. 51.. C.D. 1,216 ft.; drlg.
E. M. Carl's No. 1 F. Gembler, 160 ft. from N line, 750 ft. from E line of tract in J. Montes Sur. ..... T.D. 825 ft.; set csg.
F. H. Eckert & Son's No. 1 Louis Brehm, W offset to No. 3 John J. Brehm ..... Location.

GAS RIDGE—BEXAR COUNTY

American Gas Co.'s No. 5 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodriges Sur. ..... T.D. 2,223 ft.; fishing.

DUNLAP POOL—CALDWELL COUNTY

Bob Rose's No. 1-B Walker, 320 ft. from NW line, 150 ft. from NE line of Walker lease, Solomon Seal Sur.. T.D. 2,460 ft.; bridged; standing in oil.
Cole et al's No. 1 Pierce, 400 ft. from NE line, 445 ft. from NW line of Pierce 100-ac. tract in Solomon Seal Sur. ..... Derrick on ground.
Dickson & McDowell's No. 1 G. and S. C. Walker, 150 ft. from NE and NW lines of Walker 40-acre tract, Solomon Seal Sur. ..... T.D. 2,477 ft.; abnd.
Hadley et al's No. 1 Nugent, 150 ft. from NW and NE lines of 46-acre tract ..... T.D. 2,156 ft.; set csg.
Owen & Gunby's No. 1 Dunlap, 700 ft. SW of Smilock's No. 1 Dunlap and 150 ft. from SE line of tract, S. Seal Sur. ..... T.D. 2,257 ft.; set csg.
Smilock Oil Co.'s No. 1 Dunlap, offsetting Bob Rose's No. 1 Pierce, in Solomon Seal Sur .... T.D. 2,400 ft.; standing.

SALT FLATS—CALDWELL COUNTY

Hickman et al's No. 1 C. A. Dickerson, 150 ft. N of cen. of S line of tract in John D. Rains Sur. ..... Spudded in.

WEBSTER POOL—CALDWELL COUNTY

C. J. Webster Oil & Gas Co.'s No. 1 C. F. Robertson, 700 ft. from E line, 200 ft. from N line of 100-ac. tract, John A. Neill Sur. ..... Derrick.
C. J. Webster Oil & Gas Co.'s No. 1-A McCrory, 75 ft. NW of No. 1 McCrory in John A. Neill Sur. ..... T.D. 2,120 ft.; running tubing.

COLE POOL—DUVAL COUNTY

Cole Petroleum Co.'s No. 76 Benavides, 1,010 ft. from NE lines, 150 ft. from NW lines of Blk. 8, Sec. 19, Cole Subd. of Mariano Arispe grant ..... T.D. 1,752 ft.; bailing.

GOVERNMENT WELLS—DUVAL COUNTY

F. J. Bissonet and Wm. McGinley's No. 1 Lundell, 150 ft. from E line, 660 ft. from S line of Sur. No. 48 .. Rigging up.
Buchanan & Terrell's No. 2 R. T. Ellison, 510 ft. from E line, 150 ft. from S line of NE NW of Sur. 44 ..... T.D. 730 ft.; drlg.
R. F. Byrd's No. 1 R. T. Wright, 150 ft. from N and W lines of Sur. 101 ..... T.D. 2,311 ft.; whipstocking.
H. H. Coffield's No. 2 Wendt, 150 ft. from N and E lines of SE NE, Sur. No. 43 ..... Rigging up.
Humble Oil & Refining Co.'s No. 4 White, 3,210 ft. from S line, 1,320 ft. from W line of Sur. 58 ..... T.D. 2,283 ft.; drilling in.
Magnolia Petroleum Co.'s No. 9 J. T. Johnson, 150 ft. from S and W lines of NE of Sur. No. 44 ..... T.D. 2,337 ft.; comp. 1,000 bbls.
Magnolia Pet. Co.'s No. 3 Wendt, 150 ft. from N and W lines of SE NW of Sur. No. 44 ..... T.D. 500 ft.; drlg.
Magnolia Petroleum Co.'s No. 1 Brodbeck, 150 ft. from S and E lines of W half NW NE Sur. No. 44 ..... T.D. 2,450 ft.; drlg.
George Parr's No. 1 Benavides School, 150 ft. from S and W lines of Sur. No. 44 ..... Derrick.
Petroleum Finance Corp.'s No. 1 C. W. Hahl, 150 ft. from N and W lines of SW Sur. No. 46 ..... T.D. 1,550 ft.; drlg.
San Diego Oil Corp.'s No. 1 Riley, 150 ft. from N and W lines of W half of NW of Sur. 46 ..... T.D. 2,281 ft.; drlg. in.
San Diego Oil Corp.'s No. 1 L. Bennett, 150 ft. from S and W lines of SE SW Sur. No. 44 ..... T.D. 2,270 ft.; coring for sand.
Seacord & Putnam's No. 1 Johnson, 150 ft. from S and E lines of NW NW of Sur. 44 ..... T.D. 2,305 ft.; comp. 500 bbls.
Southwest Drilling Co.'s No. 2 Wendt, 150 ft. from N and E lines of SE of Sur. 43 ..... Drlg.
The Texas Company's No. 1 D. F. Freer, 150 ft. from N and E lines of Sur. No. 45 ..... T.D. 2,278 ft.; set csg.
The Texas Company's No. 1 Riggs, 150 ft. from N and W lines of E half of NW of Sur. No. 46 ..... T.D. 2,305 ft.; comp. 500 bbls.
The Texas Company's No. 2 Riggs, 150 ft. from N and E lines of E half of NW of Sur. No. 46 ..... Location.
The Texas Co.'s No. 1 C. W. Freer, 150 ft. from S and E lines of SE NE Sur. No. 45 ..... Location.
Whisenant, Trenchard & French Oil Corp.'s No. 1 C. W. Hahl, 220 ft. from S line, 820 ft. from E line of SW SW of Sur. 44 ..... Spudded in.
Windsor Oil Co.'s No. 2 L. L. Cummings, 450 ft. from S line, 150 ft. from E line of E of NW NE of Sur. 44 ..... T.D. 2,296 ft.; set csg.

SARNOSA FIELD—DUVAL COUNTY

Edwin M. Jones' No. 1 J. F. Williams, 2,156 ft. from NE line, 150 ft. from NW line of Sur. No. 121 ..... Location.
Smith & Capps' No. 2-A Duval County Ranch Co., 200 ft. from SE and SW lines of W half of Sur. No. 574 ..... Location.
The Texas Company's No. 1 R. L. Brown, 635 ft. from SE and SW lines of N quarter of Sur. No. 574 ..... Moving in.
The Texas Company's No. 2 Ruiz, 150 ft. from NE and SE lines of Sur. No. 127 ..... T.D. 2,112 ft.; drlg.
John F. Camp's No. 2 Well, 1,200 ft. N, 18 deg. W of No. 1 Well in Sur. No. 570 ..... Set surface csg.
E. R. Thomas' No. 1 Duval County Ranch Co., 150 ft. from SE and NE lines of E and S of Sur. 570 ..... Rigging up.
Smith & Capps' No. 2 Duval County Ranch Co., 2,210 ft. from NW line, 150 ft. from NE line of Sur. 576... T.D. 2,330 ft.; set csg.
Smith & Capps' No. 3 Duval County Ranch Co., 200 ft. from NE and SE lines of N of Sur. 576 ..... T.D. 2,414 ft.; comp. 500 bbls.

SLICK POOL—GOLIAD COUNTY

T. B. Slick estate's No. 2 Allen, 1,650 ft. from NE line, 330 ft. from NW line of tr. in Obid Marshall Sur. . T.D. 4,243 ft.; pulling tubing.
Slick-Seeligson, Inc.'s No. 3 Allen, 1,650 ft. from NE and SE lines of tract in Obid Marshall Sur. ..... Location.

DARST CREEK—GUADALUPE COUNTY

Humble Oil & Ref. Co.'s No. 5 Dan Denman ..... T.D. 2,525 ft.; set csg.

SAL-MAR FIELD—GUADALUPE COUNTY

R. R. Ogden's No. 1 Zunker, 500 ft. from S line, 165 ft. from E line of tract in L. Bollinger Sur. ..... Rigging up.
A. W. Wormser's No. 1 Pfullman, 450 ft. W of Sal-Mar Oil Co.'s No. 1 Zunker in L. Bollinger Sur. ..... T.D. 2,031 ft.; standing.
A. W. Wormser's No. 1 Harris, 150 ft. from N line of tract and 150 ft. E of creek in Green Dewitt Sur.... Derrick.

JACOB POOL McMULLEN COUNTY

Jacob, Buzzini & Pickett's No. 1-B Jacob, Sec. 15 G.H.&H. Ry. Sur. ..... T.D. 1,065 ft.; abnd.
Longhorn Oil Co. and American Gas Co.'s No. 1 Lark, 2,790 ft. from N line, 1,150 ft. from W line of Lark tract, E. W. B. Scrugham Sur. ..... Moving in.

WENTZ POOL—McMULLEN COUNTY

V. G. Schimmel's No. 1 Two Rivers Ranch, SE cor. of Sec. 59, 5 miles S of Wentz ..... T.D. 1,225 ft.; drlg.

ADAMS FIELD—MEDINA COUNTY

Yantis Oil Co.'s No. 1 Adams, 420 ft. from S line, 2,000 ft. from W line of F. Mumme Sur. ..... Location.

SAXET FIELD—NUECES COUNTY

Gulf Coast Oil Co.'s No. 2 Perkins & Gasse, 650 ft. from N line, 990 ft. from E line of Sec. 26 of Shepherd farm lots ..... T.D. 1,612 ft.; drlg.
Gulf Coast Oil Co.'s No. 1 Frank Bliss, 330 ft. from S and E lines of N half of 225-ac. tract ..... T.D. 1,310 ft.; drlg.
Kepley et al's No. 2 Roark, 150 ft. from S and W lines of Roark lease ..... Rigging up.
McCarthy-Rogers-Nix et al's No. 1 Isencee, 151 ft. from W line, 172 ft. from N line of Blk. 12 of Shepherd farm lots ..... Rigging up.
Saxet Oil Co.'s No. 2 Walton, 200 ft. from S line, 639 ft. from W line, N offset to Sun-Kepley Donegan ..... T.D. 2,432 ft.; testing sand.

ARANSAS POOL—SAN PATRICIO COUNTY

Atlantic Oil Prod. Co.'s No. 4 Welder, 1,900 ft. S, 30 deg. E of No. 3 Welder ..... T.D. 5,805 ft.; abnd.

LOS OLMOS POOL—STARR COUNTY

V. V. Combs' No. 1 Kelsey Bass, 150 ft. from N and W lines of NE NE, Sec. 6, Porciones 75, 76 and 77 ..... Location.
Hooks & Weaver's No. 8 Kelsey Bass, 450 ft. from S and W lines of E 20 acres of NE SW Section 6, Porciones 75, 76 and 77 ..... T.D. 360 ft.; standing.
J. P. Moore and C. B. Van Matre's No. 1 Seabury et al, 150 ft. from E line, 750 ft. from S line of Share 5, Subd. of W part of Porcion 75 ..... Spudded in.
Griffin et al's No. 1 Bass, 150 ft. from N and W lines of NW NW Sur. 11, Subd. Porciones 75, 76, 77 ..... T.D. 1,400 ft.; standing.
Los Olmos Oil & Gas Co.'s No. 17 Kelsey-Bass, 150 ft. from S and W lines, NW SE of Sec. 7, Subd. of Porciones 75, 76, 77, Jurisdiction Camargo ..... T.D. 465 ft.; estimated 75 bbls.
Los Olmos Oil & Gas Co.'s No. 20 Kelsey Bass, 250 ft. from S line, 600 ft. from E line of SE of SW of Sec. 6, Porciones 75, 76, 77 ..... T.D. 435 ft.; comp. 15 bbls.
Los Olmos Oil & Gas Co.'s No. 22 Kelsey Bass, 450 ft. from S line, 150 ft. from W line of NW SE of Sec. 7, Porciones 75, 76 and 77 ..... T.D. 435 ft.; comp. 75 bbls.
Los Olmos Oil & Gas Co.'s No. 23 Kelsey Bass, 480 ft. from S line, 975 ft. from W line of SE SW of Sec. 6, Subd. of Porciones 75, 76 and 77, Jurisdiction of Camargo ..... Location.
Munday Bros.' No. 1 Seabury, 840 ft. from E line, 4,550 ft. from S line of Share 5, Subd. of W two-thirds of Porcion 75, Jurisdiction of Camargo ..... Rigging up.
Sinclair & Rutherford's No. 1 Kelsey Bass, 150 ft. from S and W lines of SE NW Sec. 6, Subd. of Porcions 75, 76, 77 ..... T.D. 335 ft.; drlg.

RIO GRANDE CITY POOL—STARR COUNTY

Echols et al's No. 1 Doyno, 450 ft. from N line 150 ft. from W line of Lot 6, Share 77-A, Porcion 81 ..... T.D. 1,480 ft.; abnd.
Coastal Oil & Gas Co.'s No. 1 Olivarez, 150 ft. from NE and SE lines of easternmost corner of Share 35, Porcion 80, Camargo ..... Derrick.
L. W. Connor's No. 1 Goodrich, 150 ft. from N and E lines of Tract 5, Lot 5, Porcion 81 ..... Drlg. 925 ft.
T. J. Heard's No. 1 Block, 150 ft. from S and E lines of Lot 4, Tract 28-A of Por. 80, Jurisdiction Camargo ... T.D. 2,700 ft.; drlg.
R. E. Johnson's No. 1 F. H. de Izaguirre, 150 ft. from E line, 450 ft. from N line of Share 36-A, Porcions 80-81, Jurisdiction of Camargo ..... Spudded in.
King Pin Oil Co.'s No. 1 T. C. Lewis, 207 ft. from E line, 111 ft. from S line of Share 22, Porcion 80, Jurisdiction of Camargo ..... Derrick
Edgar Swift's No. 2 Frank Doyno, 750 ft. from E line, 470 ft. from S line of Blk. 8, Share 77-A, Porcion 81.. T.D. 500 ft.; drlg.
Tarver & Nance's No. 1 Seabury et al, 400 ft. from W line, 150 ft. from N line of Tract 21, in Porcion 79, Camargo ..... T.D. 2,310 ft.; testing.
Traylor et al's No. 1 Laborde, 150 ft. from S and W lines of W 20 acres of Lot 6, Tract 5, Porcion 81 ... T.D. 1,470 ft.; abnd.

ROSENBERG POOL—WEBB COUNTY

Montex Oil Co.'s No. 1 M. Vela, 479 ft. from N line, 490 ft. from W line of Blk. 4, Sur. No. 267 ..... Derrick.
South Texas Oil Co.'s (Rosenberg) No. 4 Laurel, in Blk. 10, Sur. No. 271 ..... T.D. 715 ft.; drlg.

WEST COLE POOL—WEBB COUNTY

French Oil Corp.'s No. 1 Rosa Benavides, 450 ft. from S and W lines of Sur. No. 659 ..... T.D. 2,075 ft.; drlg.

CHAPMAN POOL—WILLIAMSON COUNTY

Westbrook Oil Co.'s No. 9-B Lawrence, 340 ft. NE of No. 8-B and 150 ft. from SE line of 37-ac. tr. in S. Miller Sur. ..... Location.

ESCOBAS POOL—ZAPATA COUNTY

Allied Oil & Gas Co.'s No. 34 Gutierrez, 898 ft. from SE line, 1,790 ft. from NE line of Share 4, Comitas grant ..... T.D. 1,474 ft.; comp. 50 bbls.
Blankenship & Hill's No. 1 Montemayor, 150 ft. from W line, 450 ft. from S line of Blk. 6, Sur. No. 64 ..... Location.
F. M. Blair & Son's No. 1 Montemayor, 450 ft. from N line, 150 ft. from E line of Blk. 1, Sur. 63 ..... T.D. 1,700 ft.; setting csg.
McGinley Oil Corp., No. 1 G. T. Montemayor, 150 ft. from N and W lines of Blk. 6, Sur. 64 ..... Location.
Shankle and Newton Oil Co.'s No. 18 Trevino, 338 ft. from SE line, 200 ft. from SW line of Blk. 14, Sur. 65 ..... T.D. 1,230 ft.; set csg.
The Texas Co.'s No. 10 Measles, 17,100 ft. from SW line, 1,135 ft. from SE line of Cerrito Blanco grant... T.D. 1,193 ft.; set csg.

CHARCO REDONDO POOL—ZAPATA COUNTY

L. G. Smith's No. 1 J. M. Martinez, 350 ft. from NE and SE lines of Blk. 18, Share B, Duke's Subd. of Charco Redondo grant ..... Location.
Windsor Oil Co.'s No. 1 Martinez, in NE of Blk. 15, of W. R. Duke Subd., Charco Redondo grant ..... T.D. 785 ft.; drlg.

MARTINEZ FIELD—ZAPATA COUNTY

Newton Drilling Co.'s No. 2 Garza, 225 ft. from N line, 1,000 ft. from W line of Blk. 4, Sur. 161 ..... T.D. 2,045 ft.; drlg.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

GAS FROM GALLON OF GASOLINE

Would like to know how many cubic feet of gas could be vaporized from 1 gallon of casinghead gasoline of the 26-70 grade, recovery 90 per cent, gravity A.P.I. 84.5° to 87°?—F. E. U.

Natural gasoline is not a definite substance of uniform composition, being a mixture of hydrocarbons extracted from natural gas by a physical process and concentrated or adjusted to meet certain broad arbitrary commercial standards. The physical and chemical properties of any natural gasoline must depend upon the substances present in the natural gas and the grade of gasoline manufactured. The essential specifications for natural gasoline are physical, so the exact chemical composition of a selected grade of gasoline from an Oklahoma natural gas, one from Pennsylvania, or California will not be the same. Great differences exist in the specific characteristics of natural gas as they do for the various petroleums.

Any specific natural gas will have a definite composition and from this a fixed quantity of liquid condensate may be obtained which will have a certain vapor pressure at a selected temperature. Martin Shepherd has stated in the article, "Determining Gasoline Content of Gas," The Oil and Gas Journal, June 27, 1929, Page 48—"In the case of natural gasoline this condensate will contain all of the pentane and hydrocarbons of higher boiling points occurring in the original gas, and in addition as much normal butane as may be incorporated without exceeding the fixed vapor pressure (p) at the temperature (T)." In the same article the analytical method for the determination of the gasoline content of any natural gas is outlined as follows:

1. The natural gas sample is separated by a system of isothermal fractional distillations into three fractions: The first consists of iso-butane, propane and hydrocarbons of lower boiling points, together with nitrogen, traces of oxygen, carbon dioxide and rare gases, if present. The second consists of normal butane. The third consists of pentanes and hydrocarbons of higher boiling points.

2. The volumes of the first and second fractions are measured in the vapor phase at 60° F., 30 inches of mercury. The volume of the pentane fraction is determined in the vapor phase by difference, and in the liquid phase by direct measurement at 32° F.

3. The maximum vapor pressure of the pentane fraction is measured at a fixed temperature (T). Measured increments of the butane fraction are then recondensed into the pentane fraction, and the increase of maximum vapor pressure at T is noted for each condensate so obtained. From these data it is possible to determine the percentage of condensate present in the gas at the selected pressure and temperature, also to convert the measured volume to gallons of condensate per 1,000 or 1,000,000 cubic feet. A similar operation is necessary in order to determine exactly how much gas will be formed from a given gasoline.

The hydrocarbons may be converted into vapor on the basis shown in the table.

VOLUME OF VAPOR FROM HYDROCARBONS, TEMPERATURE 60° F.

One gallon of	Equivalent cubic feet
Propane	36.48
Butane	32.56
Pentane	27.60
Hexane	24.25
Heptane	21.65

When making approximate estimations it is the practice to use 32 to 35 cubic feet as the vapor equivalent of 1 gallon of natural gasoline, the higher figure being more often used. As has been indicated above an exact equivalent cannot be found without making an analysis.

OZOKERITE PURIFICATION USE AND VALUE

Any information on the uses of ozokerite, general methods of purification, the greatest users of this mineral wax, and on the present market price per ton would be very much appreciated.—E. H. L.

Ozokerite is found as a fossil or mineral wax in several parts of the world and may be separated from certain petroleums. Its chief use is for the manufacture of ceresin, the name given to the purified product. Ceresin is a high melting point wax. The yield from ozokerite may vary from 50 to 90 per cent. It is used for the insulation of cables, treating of wood, preparation of polishes and greases, the manufacture of beehive cells, floor-wax, the coating of barrels, the preparation of high-grade candles and the wax bottles for handling of corrosive chemicals, especially hydrofluoric acid.

Ozokerite is graded on the basis of mleting point and color, the natural color being black to green. There are five grades commonly recognized when dealing in the crude wax, the melting points of these range from 64° to 80° C. (147° to 176° F.), each grade having a spread of 2 degrees Centrigrade. At this time the New York market quotes three grades, color hard green, in bags, 66° to 68° C., melting point, at 0.26 cents a pound; 70° to 72° C. at 0.28 cents, and 74° to 76° C. at 30 cents. The price at the mine (Asia) is reported to vary from $200 to $400 a ton.

The separation of the ozokerite from extraneous material depends upon heat treatment with settling and the extraction of the wax by means of solvents. The purification of the commercial ozokerite for the preparation of ceresin may include heating of the wax and the action of sulphuric acid, following with thorough agitation with charcoal and filtering. The cooled filtrate is then extracted with a volatile solvent and the ceresin obtained as a residue by distillation. The modern method is similar to the contact method for the decolorization of lubricating oils. In this the ozokerite is treated at a temperature slightly above its melting point with concentrated sulphuric acid, 10 to 20 per cent, then filtered through fuller's earth or a suitable contact clay, diluted with naphtha and centrifuged. The ceresin is separated from the petroleum obtained. The best grade of ceresin is snow white in color.

LIQUID HELIUM EXTRACTION

Is the extraction of helium from natural gas a mechanical or chemical operation? Could you give a description of how this gas is reduced to liquid form?—L. A. H.

The method for the extraction of helium from natural gas is essentially mechanical, the only chemical operation that might enter into the process being the use of chemicals for the preliminary purification of the natural gas. The separation of helium from natural gas depends upon the principle of fractional separation at low temperatures, this being the reverse of distillation.

The liquefaction of helium has been described by Dr. F. C. Brickwedde of the U. S. Bureau of Standards, and this description will serve to show the necessary steps for the separation of helium in addition to the next operations required for preparing the liquid.

Although gaseous helium was first condensed to a liquid at the University of Leiden in Holland in 1908, it was not until April, 1931, that it was liquefied in the United States. This was accomplished in the Low Temperature Laboratory of the Bureau of Standards.

Since the liquefaction of helium requires liquid hydrogen, and liquid air is needed for the liquefaction of hydrogen, the first step in the liquefaction of helium is the production of comparatively large quantities of liquid air.

Air is liquefied by subjecting it to a pressure of about 3,000 pounds per square inch, and then causing it to flow in a steady stream through a special apparatus called an air liquefier in which it expands to atmospheric pressure. When the compressed air expands from a high to a low pressure a small degree of refrigeration is produced which is used to cool the compressed air that follows, before it in turn expands, producing a still lower temperature.

The liquefier in this way intensifies the cold produced by the small amount of refrigeration until a low temperature, 300° below zero F., is reached, at which a part of the air is liquefied.

The next step is the liquefaction of the hydrogen. Hydrogen compressed to 2,000 pounds per square inch is passed through a hydrogen liquefier in which it is cooled to minus 340° F. with liquid air boiling in vacuum, and then allowed to expand to atmospheric pressure. Just as in the case of air, the small amount of refrigeration produced by the expansion is made by the liquefier to cool the hydrogen to its liquefaction temperature, minus 423° F., and to liquefy a part of it.

Having obtained the liquid hydrogen, one is ready to undertake the liquefaction of the helium. In the helium liquefier, the liquid hydrogen, boiling under a reduced pressure, is made to cool the compressed helium, flowing through the liquefier at a pressure of 350 pounds per square inch to minus 434° F. before expanding to a low pressure.

Just as the liquid air and hydrogen collect at the bottom of the air and hydrogen liquefiers, respectively, the liquid helium collects at the bottom of the helium liquefier, but at a much lower temperature, minus 452° F. By allowing the liquid helium to boil in a vacuum, temperatures as low as 458° below zero F., or only 1.5° F. above the absolutely lowest possible attainable temperature, have been produced.

The liquid helium that is being produced in the Low Temperature Laboratory of the Bureau of Standards is being used to investigate the properties of matter at these extremely low temperatures, 434° to 459° below zero F., which would be unattainable were it not for helium.

METHODS OF WAX REMOVAL

I am very anxious to get an inexpensive method for removing paraffin from the heavy ends after ordinary distillation. Could you tell me where I could get the details of a method that would not be too expensive?—C. B. K.

There are several methods for the separation of wax from lubricating stocks or residuals. The better known methods are based on the fact that the wax contained in an oil will tend to solidify, form crystals, when the oil is cooled. These crystals of wax may be separated from the oil-wax mixture by means of a strainer or by settling. The strainer is the wax press containing a large number of cloth filter plates through which the cold oil is passed under pressure. The greater part of the wax remains on the cloth and the oil passes through. Cold settling is based on the use of either natural temperatures or the introduction of artificial refrigeration, where the oil is diluted with naphtha and then exposed to low temperatures. Cold settling is about the oldest method and was originally made use of during the winter months, the wax gradually settling to the bottom of the tanks so that the oil could be drawn off at the end of the season. The centrifugal method is a modification of the cold settling method. In this the oil is diluted with naphtha and then cooled to 40 or 50° below zero. The cooled mixture is then run through a centrifuge, the wax separating on the same principle that cream is obtained from milk. There is another method that may be used under some conditions; that is the solvent extractions process.

Considerable research has been directed to the use of a suitable solvent for separating oil and wax. The cold settling and centrifugal methods make use of the selective action of naphtha. Kerosene, pentane, hexane, octane and other hydrocarbons have been suggested for this purpose. Acetone, several alcohols, nitrobenzol, and trichlorethylene have been mentioned in numerous patents. The naphtha mixtures and the other selective solvents must be separated from the dewaxed oil by distillation.

This very brief mention of the several methods for the separation of wax from oil is sufficient to indicate that with the exception of natural cold settling there is no cheap method available.

TRANSIT HOLLOW BALL VALVES Will Increase the Capacity of your Pipeline Pumps

Use them to replace Solid Balls

See that your suction valves are light and lift easily.

Then you can expect to pump a cylinder full of oil each stroke, even when pumping East Texas crude.

Light valves reduce the pull on the column of oil and cut down the tendency of the oil and gas to separate.

And remember, you get paid for pumping oil—not gas.

By "LIGHT VALVES", we mean TRANSIT Hollow Ball Valves.

They are hollow, light weight, seamless, balanced, extremely accurate, and contain no plugs to loosen and leak.

Carbon or stainless steel, 1 to 5 inches in diameter. Both types heat treated to give a tough metal structure throughout, together with a hard surface.

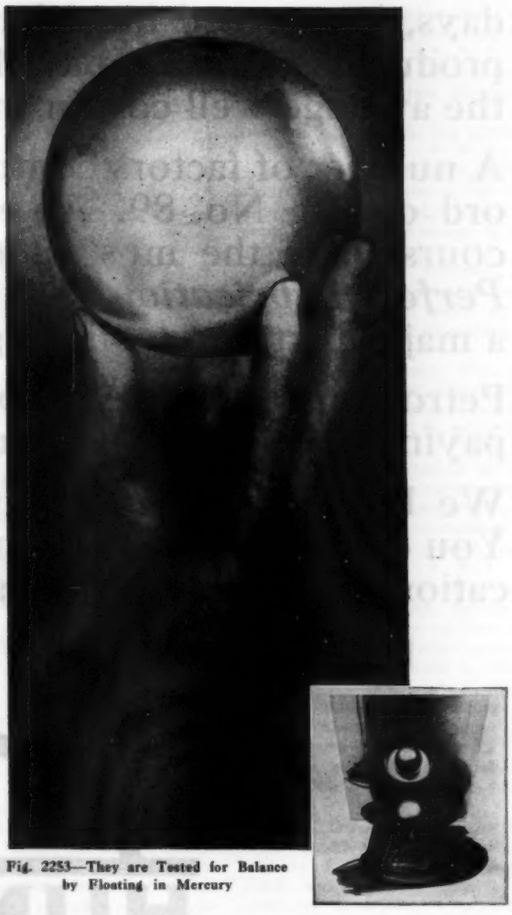

Fig. 2253—They are Tested for Balance by Floating in Mercury

A call from you will bring one of our engineers to discuss the advantages of using these valves.

PHOENIX, ARIZ. Pratt-Gilbert Co.
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LOS ANGELES Republic Supply Company of California
ST. LOUIS, MO. Reeves & Skinner Machinery Co.

New York Chicago Cleveland Pittsburgh Los Angeles Houston Tulsa

"The World's Fastest Well Diggers"

That is the title that has been conferred on the drilling crew of Humble Rig No. 89. And the facts seem to justify the title. 24 completed wells with an average depth of 3750 feet in 366 days, average time for each well 15.2 days, is a record for others to shoot at. Also, these 24 producers were completed at a cost considerably below the average well cost in the East Texas field.

A number of factors contributed to the remarkable record of Rig No. 89. An efficient, well trained crew, of course; and the most modern equipment. Add to that *Perfect Lubrication!* The driller said lubrication played a major part in establishing this record.

Petroleum engineers, superintendents and drillers are paying more and more attention to drilling rig lubrication.

We have made an exhaustive study of the problem. You can get all the data, including the Humble rig lubrication chart, for the asking.

For High Speed, Low Cost Drilling, Use Humble Products.

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Humble Oil & Refining Company

HOUSTON, TEXAS

PERSONAL PARAGRAPHS

Ross Gwilliam, counsel at Tulsa for the Ohio Oil Company, visited the Casper offices of the company recently.

* * *

Lee Gower, scout for the Sinclair Prairie Oil Company at Longview, Tex., has been transferred to San Antonio, Tex.

* * *

George C. Matson, consulting geologist, Tulsa, is taking a vacation in California, with his family, and will be gone for about a month.

* * *

W. L. Connelly, chairman of the board of Sinclair Prairie Oil Company, Tulsa, is spending some time in Casper, Wyo., his former home.

* * *

Max J. Kaplan of Minneapolis, president and general manager of the Lakota Oil & Gas Company, is spending a short time in Casper, Wyo.

* * *

L. V. Boggs, export sales manager of the National Supply Corporation, who has been in England for several weeks, has returned to New York.

* * *

J. G. Garlow, assistant field superintendent of the Burmah Oil Company at Yenangyoung, Burmah, is in Kettleman Hills studying certain production problems which closely resemble those found in Burmah.

* * *

Charles S. Jones, vice president of the Rio Grande Oil Company, arrived in Los Angeles a few days ago from New York but is expected to attend the annual meeting of the Rio Grande to be held in El Paso, Tex.

* * *

Clarence H. Lieb, president of the Carter Oil Company, Tulsa, and Mrs. Letitia Carter McClintock of Bartlesville, Okla., were married in Bartlesville last Thursday. The couple are on a wedding trip to Banff, Lake Louise and Vancouver, British Columbia. Upon their return to Tulsa August 15, they will reside at the Sophian Plaza.

* * *

F. E. Bernsen, Lucey Products Corporation; Seth Herndon, Herndon Drilling Company; Don Curran, Phillips Petroleum Company, and E. Salrin, Tidal Oil Company, left Tulsa Thursday, July 28, on the Winnie Mae for Los Angeles, Calif., to attend the Olympic games. Wiley Post, celebrated round-the-world flier, piloted the plane.

* * *

Dr. Frank W. De Wolf, professor of geology at the University of Illinois, was honored by the Dallas petroleum geologists with a luncheon at the Baker Hotel, Dallas. Mr. De Wolf formerly lived in Dallas, where he was vice president, chief geologist and a director of one of the oil companies located in that city. He has also served as state geologist for Illinois.

* * *

Ralph A. Brant, geologist, Atlantic Oil Producing Company, Tulsa, and second vice president of the Tulsa Geological Society, accompanied Richard Collins, son of Ray M. Collins, oil umpire for Oklahoma, to the national archery tournament held in Seattle, Wash., last week. Richard Collins won the national junior archery championship. Mr. Brant is returning via Denver, Colo., where he is shooting in archery competition.

* * *

Dean E. Winchester, consulting geologist, of Denver, Colo., who has been engaged for the past year in co-operation with Dr. E. H. Wells, state geologist, and with the assistance of the major oil companies, in preparing a report on the oil and gas resources of New Mexico for the State Bureau of Mines at Socorro has completed that work which will be published and available in about 90 days. The bulletin will discuss the producing areas, approximately 200 anticlines and domes and the oil and gas possibilities of the various areas in which no oil or gas has been found to date. It will be illustrated with a number of maps and include numerous logs and other data.

V. C. Fuller, purchasing agent of the Gypsy Oil Company, has gone to Colorado with his family for a vacation trip.

* * *

Rufus J. Pilcher, for several years employed in the Associated Oil Company's geological department, has recently entered the employ of the Petroleum Rectifying Company in Los Angeles.

* * *

George T. Hansen and J. L. Dugan of Salt Lake City, Utah, were in Casper, Wyo., recently. Mr. Hansen is president of the Utah Southern Oil Company and Mr. Dugan is secretary and general superintendent.

* * *

R. E. Frye of the petroleum engineering department, Midwest Refining Company, has returned to his Denver offices after having spent a two weeks' visit in the Black Hills country and in northern Minnesota near Detroit Lakes.

Men of the Industry

Charles E. Arnott

Charles E. Arnott, chairman of the New York and Paris conferences at which oil-producing nations—Russia excepted—agreed to reduce the output and to curb price wars, is president of the Socony-Vacuum Corporation. He also is credited with being one of the petroleum industry's most persuasive personalities and a master salesman.

Mr. Arnott was made a director of the Vacuum Oil Corporation in 1913. His theory that there is one, and only one, correct lubricant for each type of machine, and his persuasiveness in presenting that theory to the other directors led to his being made president of the company in 1930 and then caused the combined directorates of Vacuum and the Standard Oil Company of New York to name him head of the third largest oil company in the world in 1931. He invented a table of lubricating oils on which Vacuum built a world-wide selling policy and a sales force of extraordinary efficiency.

With his long iron-gray hair carefully parted in the middle, and dark eyes gazing out from under heavy eyebrows, Mr. Arnott often is taken by strangers to be an artist or a musician. He has a slight accent, presumably acquired from his father, who graduated from Oxford, but early came to the United States. As a public speaker he is eloquent and dramatic.

Jack Rushmore of Denver, Colo., landman and scout for the Gypsy Oil Company, has been spending a few weeks in the New Mexico oil fields.

* * *

Phillip Rabinovitch, member of the Russian commissariat of foreign trade, and a delegate to the recent oil conference in New York, recently arrived in London from Moscow.

* * *

D. R. Snow of Tulsa, vice president of Barnsdall Oil Corporation, and James Noland of Midland, Tex., of the company's land department, paid a business visit to Artesia, N. M., recently.

* * *

Fred Arneson, district manager of the Dallas, Tex., office of the Pittsburgh Equitable Meter Company, has been transferred to the Pacific northwest district, with headquarters at Seattle, Wash.

* * *

R. S. Shannon of Denver, general superintendent of the Rocky Mountain division for the Continental Oil Company, was in Casper, Wyo., watching the company's test in the Big Muddy Field.

* * *

H. K. Browning, formerly division manager on the Pacific Coast for the A. M. Byers Company, has been made director of oil country sales for the company and will headquarter in Pittsburgh.

* * *

Dr. Victor Henny, European representative of the Universal Oil Products Company, Chicago, has left London for a three weeks' stay at Royat, Puy-de-Dome, France, there to undertake the cure.

* * *

Maj. Harry Johnson, with the Gulf Production Company at Midland, Tex., has returned to work in that area after spending several months on duty with Texas National Guard in the East Texas Field.

* * *

Mr. and Mrs. Richard S. Gray observed their fiftieth wedding anniversay August 2. "Uncle Dick" spent 20 years with the Prairie Oil & Gas Company as assistant superintendent of the land department. He has been ill for several years.

* * *

P. J. Sivalls and W. H. Price of Oklahoma City, connected with Black, Sivalls & Bryson, Inc., are making a visit to the oil fields in northern Wyoming and Montana. They also expect to visit Calgary and the Turner Valley Field in Alberta.

* * *

H. T. Walsh, vice president of the Sullivan Machinery Company, Chicago, accompanied by Don Sutor, sales engineer, and C. B. Officer, mechanical engineer, have been in Oklahoma district for about 10 days on special business for their company.

* * *

K. D. Pardee of Billings, Mont., superintendent Wyoming-Montana district of The Texas Company, and L. J. Daly, division superintendent, recently made an inspection trip to Riverton where the company is drilling a second test on the Alkali Butte structure.

* * *

Nine regents of the University of Texas, the president of the institution and the commissioner of the general land office will tour 19 West Texas counties in which the university owns approximately 2,000,000 acres of land from August 21 to 28, inclusive. The trip will include visits to the Taylor-Link Field in Pecos County, the Big Lake Pool in Reagan County, the Church-Fields in Crane County and the Penn in Ector County that have brought the school about $15,500,000 in royalties. The regents are Judge R. L. Batts, Austin, chairman; R. L. Holliday, El Paso; Edward Crane, Dallas; Buford Jester, Corsicana; W. M. O'Dell, Fort Worth; Frank Yount, Beaumont; Dr. Edward Randall, Galveston; John T. Scott, Houston, and Leslie Waggener, Dallas. Messrs. Holliday, Crane and J. H. Walker, land commissioner, compose the board for the lease of university lands. Dr. H. Y. Benedict, president of the university, plans to make the tour.

NATURAL GAS DEVELOPMENTS

Court Fixes Gas Rates in Lexington, Ky., Case

FRANKFORT, Ky., Aug. 1.—A rate of 50 cents per 1,000 feet for gas in the city of Lexington, providing a return of 7 per cent upon a fair valuation of the property of the Central Kentucky Natural Gas Co. is held to be fair by a three-judge Federal court here in a decision enjoining a rate of 45 cents.

The injunction, however, was authorized by the court only on condition that the company shall file a request within 10 days for the distribution among its customers of about $750,000 which has been impounded during the court proceeding. This fund has accumulated under a 60-cent rate collected since 1927. The rate of 45 cents was fixed by the State Railroad Commission.

The Federal court expressed the opinion that a 50-cent rate would be equitable while the 45-cent rate "is inadequate and confiscatory." The court fixed the valuation of the property at $2,198,107 and stated that the 50-cent rate would yield a return of 7 per cent, which was held to be adequate.

"The plan adopted by us," the court said in its order, "provides for the return to the gas company of its entire capital by amortization in a period of 20 years. It permits the deduction of the necessary expenses incurred in ordinary maintenance. It furthermore sets up an annual reserve to cover extraordinary maintenance and repairs.

"It permits the deduction of all taxes, including the Federal income tax. In view of this assurance of the return of the entire principal in 20 years, and the allowances in the meantime of adequate amounts for necessary expenses and extraordinary maintenance, it seems to us that plaintiff's capital is about as safely invested as it can be under modern conditions. We therefore hold that a 7 per cent return on the investment is adequate."

The court was composed of Circuit Judge Charles H. Moorman and District Judges A. M. J. Cochran and Charles I. Dawson.

Missouri-Kansas Pipe Line Foreclosure Suit Answer

WILMINGTON, Del., July 30.—The Missouri-Kansas Pipe Line Co. and its receivers have filed an answer in chancery court to the foreclosure suit begun recently by the Peoples-Pittsburgh Trust Co. of Pittsburgh, Pa. The trust company action was filed to foreclose and sell collateral deposited by the pipe line company to secure payment of $1,060,000 in two-year notes issued by the company in March, 1931.

The answer stated that if the foreclosure sale were permitted at this time it would result in a total loss to unsecured creditors and the investments of the company's 22,000 stockholders. The receivers stated the value of the collateral is greatly in excess of the indebtedness and that its fair value is about $10,000,000. If the sale is postponed a reasonable time, it was claimed, the receivers, who are also receivers for the Kentucky Natural Gas Co., can negotiate for additional natural gas contracts and work out the financial difficulties of the company.

EXTENSION IN PENNSYLVANIA

PITTSBURGH, Pa., July 30.—The Peoples Natural Gas Co. has finished a 6-inch gas line from Altoona to Tyrone and also a feeder line from the above line to Bellwood.

Survey of Helium Resources in Canada Indicates Little Hope of Increase

CHATHAM, Ontario, July 30.—The Mines Branch of the Department of Mines at Ottawa has issued a report by P. V. Rosewarne, covering helium investigation in Canada. Attempts have been made to test samples of gas from each new well as it was brought in; while fresh samples from some older wells were also examined. In 1930 and 1931 samples were tested from wells in six provinces of the dominion.

It was early in 1916 that at the request of the British Admiralty, Prof. J. C. McLennan of Toronto University, conducted a survey of the helium resources of the British Empire. The results were published in 1921 by the Mines Branch at Ottawa; and indicated that the natural gases of Canada were the only sources of helium in commercial quantities in the British Empire, and that extraction plants might be located at Hamilton, Ontario, and at Calgary, Alberta, with reasonable expectations of recovering helium in quantity.

Although the world occurrence of helium is widespread, it is usually present in such small quantities as to rank as one of the rare gases. It occurs in large quantities in Canada, Italy and the United States. In Italy certain gases issuing with steam from boric acid fumaroles contain helium; but so far as known no effort has been made to recover a potential of 200,000 to 250,000 feet a day from this source. The natural gases containing the highest percentage of helium have been found in the United States, with a peak of over 7 per cent reported. The report follows:

Text of Report

In Canada, the richest gases have been found in Ontario, where samples containing over 1 per cent helium have been secured, but in all cases in this province the field from which these samples were secured was not large, and the total gas flow per well was small. In Alberta, larger fields and larger wells have been found, but the highest concentration was only about 0.3 per cent of helium. It must, therefore, be accepted that the total available supply of helium in Canada, so far discovered, is very small in comparison with that in the United States. Over 100 samples of gas have been examined for helium. These represent 113 different sources of gas. The geographical distribution was as follows: Nova Scotia, 1; New Brunswick, 4; Quebec, 15; Ontario, 16, Saskatchewan, 3; and Alberta, 74.

The apparatus used for determining the helium content of gases is essentially the same as that previously used by the Mines branch, except that it has been modified considerably to make it more compact. The essential operations are as follows: The entire apparatus is evacuated to a high degree; a measured quantity of gas is admitted and passed over a dehydrating agent; it is chilled in a bath of liquid air at which point all hydrocarbons are condensed; the residual gas containing helium, oxygen and nitrogen is passed over a special activated charcoal, cooled in another bath of liquid air, at which point nitrogen and oxygen are removed. The residual gas is then tested for purity by spectroscope and measured.

The tests given results in terms of feet of helium per 1,000 feet of gas. In Nova Scotia, a single sample of gas from an oil-shale retort showed no helium content, and the same result was secured from a similar sample from Rosevale, New Brunswick. Three samples, two from individual wells and one composite, also from New Brunswick, showed from 0.24 to 1.1 feet of helium per 1,000 feet of gas. In Quebec, the majority of 15 samples showed mere traces of helium or no helium at all. Six samples, however, showed from 0.08 to 0.60 foot per 1,000.

In Ontario, 16 samples from as many different wells were examined. A noncommercial gas showing at Sault Ste. Marie revealed no helium. In Kent County results ranged from 0.98 in the Tilbury Field to 2.26 in Olga's No. 1; while samples in in the D'Clute Field, Kent County, and the Dawn Field, Lambton County, both recorded 1.99. Two tests in Haldimand revealed 3.01 and 3.14; 3.4 was found at Collingwood and 5.25 at Clarksburg. Penn Ryan No. 2, near Meaford, showed 6.7 of helium; while a group of five wells near Inglewood, in Peel County, registered from 6.8 to 8.6. The best showing was 10.34 feet per 1,000 from Nelson No. 1 near Burlington. A perhaps significant feature is that the best helium showings were secured in areas where the gas flows are noncommercial or almost so.

Of three samples from Saskatchewan, only two, both from Riverhurst, showed helium content of 0.35 and 0.78 per 1,000 feet of gas.

Alberta Samples

In Alberta, some 48 samples from the Turner Valley Field were tested. Even with the enormous aggregate gas flows from the deep lime in that field, the helium content was too small to make it a commercial proposition, ranging from 0.14 feet of helium per 1,000 feet of gas in McLeod's No. 4 down to mere traces in other wells. Samples in some foothills and border areas were slightly better. In southeastern Alberta, on the other hand, fair percentages of helium occurred in gas fields now or formerly prolific. These six wells in the Foremost Field showed from 1.99 to 2.2 feet of helium per 1,000. In the old Bow Island Field, three samples showed from 2.91 to 3.48; and in the Barnwell Field three samples ranged from 3.6 to 4.0. In the Medicine Hat-Redcliffe area three samples ranged from 1.01 to 1.19; in Cypress Hills a sample showed 1.0; and in the Ribstone Field, east central Alberta, 1.22 was shown in a single test. Wainwright, Oyen and Brooks showed less than 0.77 helium content, and the discovery well in the new Kinsella Field recorded 0.85 helium.

In 1926 the available supply of helium in Canada was stated to be as follows:

	Nat. gas available per annum (M. ft.)	Helium content (ft. per M)	Helium recoverable per annum (ft.)
Alberta:			
Foremost	1,200,000	2.0	2,000,000
Bow Island	526,424	3.0	1,250,000
Ontario:			
Norfolk	287,790	3.9	900,000
Haldimand	377,516	2.7	815,000
Peel	30,000	5.0	200,000
Total			5,165,000

These figures were compiled on the assumption that helium could be extracted from gases containing only 2 feet per 1,000 with an efficiency of 80 per cent of that theoretically possible. However, since at least six extraction plants would have to be built and operated to obtain this quantity, and as this was only sufficient for a single commercial airship, it was not considered economically feasible at that time.

Since that time the number of wells producing natural gas in Alberta has greatly increased. This increase has been mostly in the Turner Valley Field, and although the extent of the field has been greatly enlarged, samples taken from the new wells have not shown any appreciable helium content. One significant development that affects the available supply of helium has taken place, however. The natural gas from the fields in southern Alberta was drawn upon so heavily at one time for domestic fuel that the fields reached the point of exhaustion. During the past year some of the surplus production from Turner Valley was transferred to the Bow Island Field and used for repressuring that field. By so doing, while some of the excess production from Turner Valley has been conserved, the mixture of that gas of low helium content with the Bow Island gas puts the latter definitely out of consideration as far as recovery of helium is concerned. It is true that samples taken from three wells in the Bow Island Field during 1931 did not indicate a reduced helium content, but this was undoubtedly due to appreciable quantities of the repressuring gas not yet having reached the wells in question.

In Ontario the situation has not changed. True, some wells have been drilled that show a relatively high helium content, but the gas flows are small and result in very small increases of total helium available. In New Brunswick, Quebec and Nova Scotia no new sources of supply have been found.

No Increase Expected

It is evident, therefore, that although very greatly increased supplies of natural gas are available at Turner Valley in Alberta, no increase in the quantity of helium available can be expected from it, and a definite decrease for Canada as a whole is indicated.

In 1918 a small experimental plant was set up near Hamilton in which natural gas from the Blackheath Field was treated. This field was soon exhausted and later the plant was moved to Calgary. A series of trial runs was made during the latter part of 1919 and the early part of 1920. After these runs the plant was dismantled. No further production has been made since that time. A total of about 60,000 feet of helium was obtained. Some of this was used for research work in Canada and it is reported that some of it was shipped to France for use in balloons and lighter-than-air craft.

It has been estimated by Prof. J. C. McLennan that helium could have been extracted from gas from the Bow Island Field for $100 per 1,000 feet. The plant was not operated long enough to obtain figures on actual cost of production.

Engineers to Get Data on Panhandle Gas Use

AUSTIN, Tex., July 30.—The Texas Railroad Commission has decided to have its engineers gather data in the Panhandle to guide the commission in passing on applications pending for permits to use gas in the production of casinghead gasoline.

Testimony was taken on the applications pending. The commission continued the hearings to August 10, by which time it hoped to have the data gathered by its engineers. The cases were those of F. C. Henderson, Inc., and J. B. Harris and S. C. Watt. They involved Hutchinson County properties.

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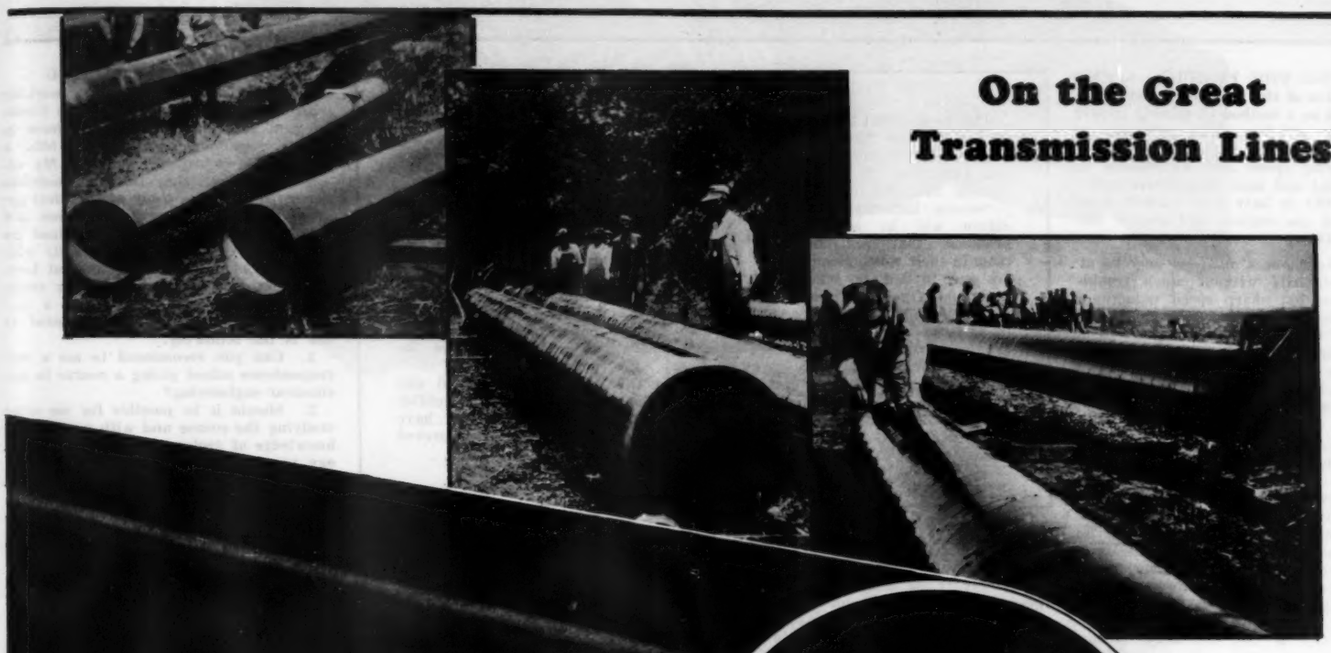

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FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

REDUCING THE PUMPING SPEED

Reduction of the pumping speed is recommended as a method of gaining greater volumetric efficiency and economy of operation. Will you tell me, please, how the pumping speed may be reduced in the simplest and most inexpensive ways? I would like to have your answer cover steam and gas engines and electric motors.—S. D. G.

Moderate changes of speed may be effected ordinarily without much trouble or expense, but sharp speed reductions, if to be accomplished at reasonable cost, are likely to call for careful selection of methods or combinations of methods, according to Hallan N. Marsh, of the General Petroleum Corp., who provides the following answer to your question:

"Steam engines can, of course, be greatly slowed down by mere throttling. This can be carried further if the well is properly counterbalanced. Gas engines can be slowed down somewhat, but there is generally a high limit of speed below which operation is unsatisfactory. The speed of oil-well type electric motors can be considerably reduced below normal by operating on controller points. As in the case of engines, this can be carried much further if the well is properly balanced. This practice is not ordinarily recommended, because motors give reduced efficiency when operating on points, so that the full power saving is not realized, and also because it increases the hazard of burning out motors unless special precautions are taken. However, where no other methods appear practical, it may be advisable.

"Considerable speed reduction can generally be accomplished at a small expenditure by changing belt pulleys. Similar changes can be made on chain drives by changing sprockets; and in some reduction gear sets the gear ratio can be changed, although this is ordinarily more expensive. Belt-reduction ratio can be increased either by increasing the diameter of the driven pulleys or decreasing the diameter of the drive pulleys. Driven pulleys are ordinarily larger and, therefore, more expensive to change. The high limit of diameter is determined by the expenditure that can be justified. Sixty inches appears to be about the economic limit in ordinary cases. Reducing the diameter of drive pulleys raises a serious question as to how small a pulley can economically be used. There is no doubt that belt speed and tension being equal, reduction of pulley size decreases the life of a belt; but within a reasonable range the accompanying reduction of belt speed offsets this adverse factor. Further reductions, even at the expense of decreased belt life, are advisable on account of the other savings effected. In practice 10-inch motor pulleys and 12-inch counter-shaft pulleys have not resulted in excessive belt wear on wells of moderate depth with 15/35 motors and six-ply belts. Eight-inch motor pulleys are said to have been used successfully in some cases. Twelve-foot bandwheels appear advisable, at least for deeper wells, but the economies of still larger wheels is questionable.

"Most new oil-well type motors have virtually the same rated speed, but in past years slower speed motors were built, and many of these are still in use. By putting these slow speed motors on wells that most need slow pumping speed, and putting the new higher speed motors on wells where speed reduction is not a problem, some advantages can be secured at negligible cost. Where squirrel-cage motors are used, very advantageous exchanges can often be made. Note that reduction of speed should not substantially affect torque required and, therefore, horsepower rating may be reduced when speed is reduced. Any squirrel-cage motor ordinarily used for pumping can be replaced with one of lower speed and power in an identical frame, so that the change does not involve change of foundations, length of belt, pulleys or couplings. These several series of motor frame dimensions have now been standardised by the National Electrical Manufacturers' Association and the standards ratified by the American Petroleum Institute. Squirrel-cage motors are commonly made to operate at speeds ranging from 450 to 1,800 r.p.m. (on 60-cycle current), so that a speed variation of 4 to 1 can be accomplished by change of motor. It is often possible to make such changes without cost when new wells are being equipped, by buying slow-speed motors instead of high-speed motors, putting the slow motors on old wells, and moving the faster motors from the old wells to the new wells.

"Speed may be greatly reduced by the insertion of an additional countershaft between the prime mover and crankshaft. Where special pumping units are superseding belted countershaft unit, countershafts and belts may be available at little or no cost, and may be economically utilized for this purpose. Where countershaft drives were originally used, the additional countershaft is best installed so that the motor drives the new countershaft and the new countershaft drives the original. In case of gas engine drives, special countershafts are sometimes installed between the engine and the crankshaft, and chain or belt drives are used from engine to countershaft and countershaft to crankshaft. All such installations are considered of makeshift nature, and are necessitated by the original rig being designed without thought of ultimate slowing down."

ROCK SALT FOUND IN DRILLING

Can you give me some information regarding the rock salt encountered in drilling oil wells in certain areas? Where and in what form is such salt found? Can you refer me to any literature relating to this subject?—S. P. C.

Great beds of salt have been encountered in holes drilled for oil and gas in many parts of this country. In the Permian Basin of West Texas thick strata of rock salt are found extending up to the salt mines of Hutchinson, Kans. Salt in the form of plugs has been found in numerous "salt domes" of the Gulf Coastal region of Texas and Louisiana.

The American Association of Petroleum Geologists, Tulsa, can give you information concerning what has been published on this subject and the librarian of the technical department of the Tulsa Public Library, Tulsa, may be able to give you a bibliography.

The U. S. Geological Survey, Washington, D. C., probably has some publications dealing directly with this subject. The U. S. Bureau of Mines has published several papers and bulletins on potash exploration carried on under its supervision in New Mexico and West Texas in which reference is made to salt formations encountered.

Why Was It Called That?

PEA-SOUP FOG

Although oil field workers of Pennsylvania and some other regions are familiar with fog which they describe as "so thick you could cut it with a knife," the pea-soup fogs of London, England, would be a revelation to them. The designation "pea soup" is applied because of their density and their dark yellowish cast. Scientists have calculated that London's shipping losses alone amount to 1,000,000 pounds a day when a "pea-soup pertickler" fog drops like a pall over the city and the Thames River nearby. Dust, chiefly smoke particles, is responsible. Each granule becomes a nucleus for a varnish of water, and there may be as many as 50,000 granules in a handful of fog if it could be scooped up at a time when it is impossible to see electric lights across the street.

WANTS MORE TRAINING

For four years I have been working with a petroleum company here in Sumatra and at present I am an engineer in a field producing about 19,000 bbls. a day, with two rotaries running. My education is about the same as Americans get at college. The study of technical papers of the U. S. Bureau of Mines and articles in oil periodicals has helped me till now to cope pretty successfully with the different problems encountered here. I feel in need though of a better training. The only way seems to be a correspondence course. What I wanted to ask is the following:

1. Can you recommend to me a correspondence school giving a course in mechanical engineering?

2. Should it be possible for me after studying the course and with a sufficient knowledge of geology and micropaleontology to pass the examinations for petroleum engineering at some well known university?

3. If this isn't possible, is a degree as mechanical engineer obtainable after the study of a correspondence course?—F. L. V., Sumatra.

Your letter was submitted to Prof. H. C. George, director of the School of Petroleum Engineering in the University of Oklahoma, who provides the following answers:

"1. I do not know of any correspondence school giving courses in mechanical engineering.

"2. I do not know of any accredited school in America which will admit students to advanced courses for credit unless they either have a record of prerequisites completed at another accredited school or permit the applicant to pass examinations in all of the work leading up to the petroleum or other engineering subjects.

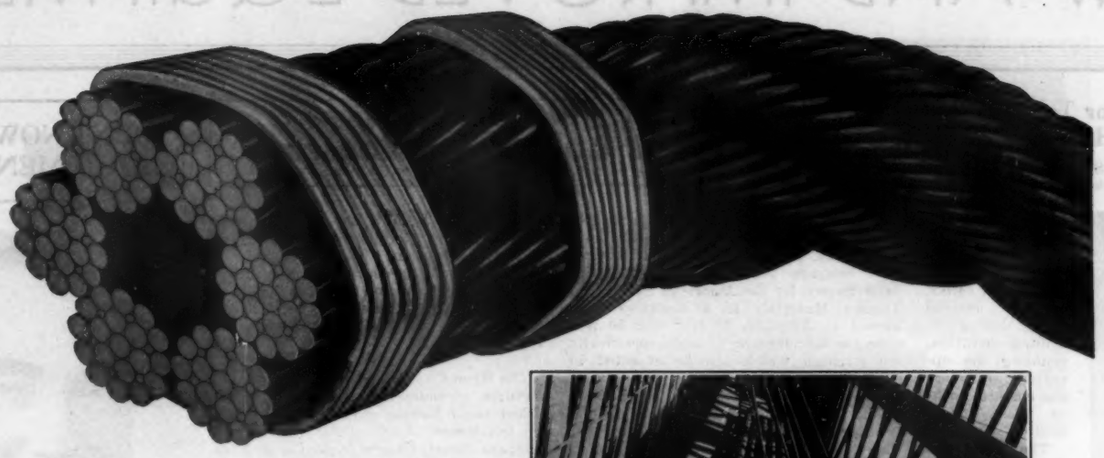
"3. A degree in mechanical engineering is obtainable only after the student has completed the undergraduate work in residence or at some other accredited school. No recognition is given to correspondence courses in engineering except after having satisfactorily completed an examination covering all of the work covered by the courses in mechanical engineering.

"Correspondence courses are not generally recognized by our American universities. Even correspondence courses offered by our leading universities can be utilized for only a small part of the work required for a degree. Most of the work must be done in residence in regularly scheduled courses."

VEGETABLE OILS AS FUEL

Is there any truth in the statement that vegetable oils make good engine fuels? I was told that such oils have been used satisfactorily in Diesel engines and I questioned the accuracy of the statement.—E. N. H.

The statement you quote is true. According to the Society of Automotive Engineers, vegetable oils make an excellent fuel for some Diesel engines. Their use necessitates no change in the compression ratio but only an easily made adjustment in the fuel valve-timing during the starting period. Starting is said to be smooth, operation regular, the thermal efficiency and fuel consumption as good as with petroleum oils or slightly better. There is virtually no fouling of the combustion chamber. French automotive engineers report having carried out experiments operating both two and six-cylinder engines on four kinds of vegetable oils with good results.



Up jerks the traveling block... a second's pause... down again at a speed that brings smoke out of the slip collar. If a rope parts, it's just too bad. At best re-rigging takes time but fishing takes more. No wonder men on the job prefer Wickwire Spencer Wire Rope. They know that it is tough and always uniform. A day lost on a drill job is expense and cream production gone forever. Use Wickwire Spencer Wire Rope inside *your* derrick.

INSIDE THE RIG

WICKWIRE SPENCER
WISSCO PRODUCTS

Send for our book. It is free and will prove of great value.

Wickwire Spencer Steel Company, 41 East 42nd Street, New York City
Buffalo, Chicago, Detroit, Philadelphia, Worcester, Tulsa, 314 East Archer St.; Pacific Coast Headquarters, San Francisco; Warehouses: Los Angeles, Portland, Seattle; Export Sales Department, New York City

WIRE ROPE *by Wickwire Spencer*

NEW AND IMPROVED EQUIPMENT

Drift Indicator Tells When Hole Is Crooked

The Santa Fe Springs plant of the Shaffer Tool Works, Brea, Calif., has developed the Shaffer drift indicator, to be run on the drill pipe above the bit or drill collar. It is left on the string during the drilling operation, enabling the operator to detect and correct crooked hole while drilling.

The device consists of a sub made of heat-treated alloy steel in which is mounted a valve operated by a plumb bob. This plumb bob is free to swing in all directions. Below the plumb bob is a cup-shaped pin. The force of the circulation tends to close the valve, but if the hole is within the required limits of straightness the plumb valve hits the pin, thereby holding the valve off the seat so that circulation is continuous.

When the hole is more than the desired degree off vertical the plumb bob will miss the pin and allow the valve to close, thus shutting off circulation. To find out if the well is off vertical it is only necessary to stop the tools and circulation for a brief period and then again start circulation. If the hole is within the required limits of straightness circulation will go on as usual and drilling be resumed, but when deflection from vertical greater than the amount for which the machine is set takes place the valve is closed, thereby shutting off the pump.

Before being able to proceed it is necessary to lift the drill pipe to a point above the crooked spot. The drill is then held up and the hole is reamed straight. In this way a continuous check is made and the hole is straightened without having to disconnect the swivel and kelly or waiting until the tools are withdrawn from the hole. This tool is available on a rental basis.

G-E DIRECT CURRENT MOTORS

A new line of direct current motors has been developed by the General Electric Co. These motors are so designed that many variations, such as different degrees of enclosure for various applications, can be accomplished by using only a few different parts. New and radically different pulley-end shields afford maximum protection to the motor windings. Drop-forged feet welded to the motor frame reduce the possibility of breakage. The improved insulation used is resistant to moisture and weak acids. Properly proportioned stabilising windings make possible unusually stable operation. In addition, the speeds of all constant-speed motors can be increased 25 per cent, and more in some ratings, by field control.

Among the Equipment Houses

As the result of several years' research work by the Gray Iron Institute, Cleveland, Ohio, the old specification for gray iron castings known as A-48-29T has been revised by the American Society for Testing Materials to a tentative form known as A48-32T. It now will be possible for foundrymen to state specifically the strength which can be expected in critical sections of their castings.

—

The Nolan Sales Corp., Oklahoma distributor for the American Hammered Piston Ring Co., has moved its office in Tulsa from 827 East First Street to 404 East Second Street.

—

M. L. Pulcher, president of the Federal Motor Truck Co., Detroit, Mich., announces the appointment of Earl W. Winans as chief engineer to succeed George B. Ingersoll, who resigned.

—

Fred Arnesen, district manager of the Dallas, Tex., office of the Pittsburgh Equitable Meter Co., has been made manager of the Pacific Northwest territory with headquarters in Seattle, Wash.

Neilan Co., Ltd., of Los Angeles, Calif., manufacturer of automatic regulating and control equipment, was appointed by O'Brien Steam Specialty Co., as exclusive representative for western and northern New York. The O'Brien company has offices in Syracuse, Rochester and Niagara Falls, N. Y.

—

The Kron Co., Bridgeport, Conn., manufacturer of industrial scales, has established the following agencies: Industrial & Commerce Scale Co., 121 North Brevard Street, Charlotte, N. C.; J. Kirk Rowell, Urban Building, Louisville, Ky.; Williams, Cole & Wolff, Inc., 315 Commerce Building, 744 North Fourth Street, Milwaukee, Wis.

—

The Columbus-McKinnon Chain Corp. has removed its fire welding operations from Columbus, Ohio, to Tonawanda, N. Y.

—

Warren Lewis, Tulsa, Mid-Continent representative for the Viking Pump Co., has moved from 409 East Archer Street to 1424 South Boston Avenue.

Byron Jackson Making Pump for Special Uses

The Byron Jackson Co., Berkeley, Calif., has developed the Hydropress pump, designed to meet the demand for pumping equipment that will deliver 100 gallons or less against pressures varying from 100 to 500 pounds. The new pump, it is announced, will be built in 3, 5, 7½ and 10-horsepower, 60-cycle machines, standardized throughout. Its uses will include refineries, pipe lines, boiler-feed service and for every service where triplex plunger pumps are employed.

The 3 and 5-horsepower units are direct-connected, operating at 3,600 r.p.m., handling from 10 to 30 g.p.m. The pump proper is built along the lines of the company's double-case, hot oil pumps, thus embodying a simple cylindrical outer case with one circular joint, permitting the use of a longtudinally split inner case, held together by the external pressure on the case, which is higher than the internal, and a few light bolts which are used for mounting only. The impellers are mounted on the shaft in advance, and the whole rotating element is statically and dynamically balanced. The outer case insures mechanical simplicity and safety, leaving the function of the inner case mainly that of assuring high hydraulic efficiency.

The inner volute of the 3-horsepower pump consists of 10 stages, and of the 5-horsepower pump 16 stages. The 7½-horsepower and 10-horsepower pumps are designed for gear drive, operating from 1,750 r.p.m. motors to pumps of 5,000-5,900 r.p.m. The standard construction in this unit employs a Sterling cross-line motor and gear. The 10-horsepower machine develops pressures in the order of 500 pounds, and the 7½-horsepower 375 pounds. Both of these units can be used advantageously for capacities of 10 to 30 g.p.m.

These pumps can be located in a small floor space, require no foundation bolts and, when connected to the piping layout with a union on both the suction and discharge side, on account of their light weights can be taken out of the piping system for inspection or repair with a minimum of inconvenience.

New Welding Blowpipe Is Developed by Linde

The Linde Air Products Co., 30 East Forty-second Street, New York, has announced a new welding blowpipe, designated as the Oxweld type W-22. Although developed primarily for use on pipe line work, its application is not restricted to this field.

The new blowpipe is similar to the Oxweld type W-17 except that the oxygen and acetylene valves are on the front of the handle, so that flame adjustments may be made more readily by the operator while the blowpipe is in operation. Since it is preferable to control flame adjustment by means of the acetylene valve, this valve is located on the left side of the front of the handle where the operator's right thumb can regulate it conveniently.

The oxygen valve is on the under side of the handle where it also may be reached easily. This arrangement makes it unnecessary for the operator to use his left hand, which is holding the welding rod, to adjust the blowpipe valves.

A special feature of the blowpipe is the long acetylene passageway between the acetylene valve and the injector which minimizes the possibility of flashback. This is accomplished by having three acetylene tubes between the rear and front bodies. The acetylene comes from the hose connection up to the valve in the front body, passes through a second tube back to the rear body, thence through a cross drilling to a third tube leading to the injector.

The ball-type acetylene valve consists essentially of a stainless steel sphere hardened and ground with extreme accuracy by a new process. This sphere gives a narrow line of contact and eliminates difficulties which might be caused by the deposition of carbon in the valves.

Engineering information in the new condensed catalog issued by the B. F. Goodrich Rubber Co., Akron, Ohio, includes a table on rubber transmission belting, giving at a glance horsepower capacities, minimum pulley diameters, and leather belt equivalents.

MEN KNOWN *in* THE EQUIPMENT FIELD

F. HAROLD GRAY

F. Harold Gray, joint foreign representative of the Reed Roller Bit Co. and the Fluid Packed Pump Co., has gone to London, England, intending to take up residence in or near that city, and to establish permanent foreign representation for his companies, using London as his base. From there he will make periodic trips to the various foreign fields where the products manufactured by his companies are in use.

Mr. Gray came to this country from Wales to learn the oil business 10 years ago. He got his first job with the Carter Oil Co., a Standard of New Jersey subsidiary, in the Burbank Field, which was then in its boom stage, and he remained in the service of the Carter company for several years. He also was employed for several years in the producing department of the Compania Transcontinental de Petroleo, another Standard subsidiary, serving in that company's properties in the Panuco district of Mexico.

Mr. Gray spent several years in eastern Europe before coming to America. He recently completed a trip around the world which included visits to most of the producing oil fields of Europe and Asia.

HYDRAULIC OPERATOR

A hydraulic operator, said to be practically foolproof, is a recent development of Shand & Jurs Co., Berkeley, Calif. Regardless of how many times the operator works the handle up and down, it has no detrimental effect on the system. The fluid merely by-passes at a predetermined pressure. For the sake of convenience, provision for the handle is made on each side of the operator. The low cover of the body can be changed to four positions. If it is more convenient to bring the hydraulic lines out to the left, right, back, front or bottom, this can be easily arranged. This improved model can be installed on any tank truck.

"Taylor Forge," a booklet issued by the Taylor Forge & Pipe Works, Chicago, presents a series of pictures showing the adaptability of Taylor Forge fittings in fabricating and welding work.

THE FRAME...

designed for maximum strength and rigidity with a minimum of weight

The frame is the backbone of the Diesel. Its duty is to withstand the thrust of firing cylinders, the vibration of whirling connecting rods, to provide adequate support for the cylinders against the angularity of connecting rods, to provide a housing for the cylinder cooling system, and to make an oil tight contact with the bedplate, forming the crankcase proper. It must do all of these things and still offer a minimum weight of metal for easy portability.

Skillful designing of the De La Vergne Diesel—the most thoroughly developed Diesel engine in the world—provides a frame that answers all of these requirements.

It is cast iron, heavily ribbed in arched sections over each main bearing—built like a sky scraper to distribute stress, to provide rigidity by form of structure rather than by weight of metal.

The cylinders are seated into the two cylindrical surfaces shown in the top of the casting—well separated to provide maximum support and to relieve the cylinder bolts from side thrust due to the angularity of connecting rods.

The interior of the casting is thoroughly cleaned by chipping and sand blasting and bound with pigment as a precautionary measure to prevent the possibility of any foreign matter falling into the crank case.

The bedplate flanges are wide, forming a perfect oil-tight union with the bedplate.

Large crankcase doors and ample hand-holes provide easy access to the interior.

The cooling water header is placed in the false top ensuring against water entering the crankcase and polluting the lubricating oil.

Why not come to the oldest builder of oil engines in America for your requirements—the builder that holds records for long non-stop runs—for fuel economy at given loads—the builder that has more Diesel horsepower in oil pipe-line service than any other builder in the world. Write.

DE LA VERGNE ENGINE CO.

SALES AGENT FOR BALDWIN-SOUTHWARK CORP.
DIESEL DIVISION

PHILADELPHIA, PA.

Pacific Coast Representatives, Pelton Water Wheel Co., San Francisco

Summary of Operations in All Fields for the Month of June

SUMMARY OF ALL FIELDS

Wells Completed

	Comp.	Prod.	Dry	Gas
Eastern	126	468	24	21
Central Ohio	21	107	7	8
Lima	11	213	1	5
Indiana	11	310	4	3
Michigan	12	5,795	3	0
Kentucky	42	1,065	13	2
Illinois	0	0	0	0
Kansas	44	13,948	15	2
Oklahoma	74	30,617	28	5
North Central Texas	127	4,128	73	2
E. Cent. and E. Tex.	638	39,002	10	0
East Texas gas field	1	0	1	0
West Texas	22	1,773	8	1
Panhandle Texas	20	6,261	2	3
Gulf Coast	66	16,215	33	2
Southwest Texas	72	8,277	42	3
North Louisiana	32	9,005	16	8
Arkansas	7	0	7	0
Mississippi	6	0	3	3
Montana	2	10	1	0
Wyoming	1	300	0	0
Colorado	5	0	4	1
New Mexico	3	6,454	1	0
Utah	1	35	0	0
Total June	1,345	142,991	391	66
Total May	1,282	187,493	255	77
Difference	51	44,501	43	11

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Eastern	60	136	196
Central Ohio	19	66	85
Lima	2	14	16
Indiana	3	70	73
Michigan	59	74	133
Kentucky	7	62	69
Illinois	1	20	21
Kansas	54	117	171
Oklahoma	131	335	466
North Central Texas	58	146	204
East Cent. and East Texas	323	390	713
East Texas gas field	4	27	31
West Texas	18	92	110
Panhandle Texas	14	43	57
Gulf Coast	7	127	134
Southwest Texas	23	140	163
North Louisiana	64	70	134
Arkansas	7	25	32
Mississippi	1	16	17
Alabama	1	4	5
Montana	18	61	79
Wyoming	18	76	94
Colorado	10	65	75
New Mexico	8	48	56
Utah	0	17	17
Total June	910	2,241	3,151
Total May	858	2,284	3,142
Difference	52	43	9

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

Oklahoma Fields

Summary of Wells Completed

	Comp.	Prod.	Dry	Gas
Beckham	1	0	1	0
Carter	2	45	1	0
Creek	13	344	8	2
Lincoln	3	237	1	0
Marshall	3	0	3	0
Muskogee	4	20	1	2
Osage	3	1,200	1	0
Okmulgee	6	35	4	0
Oklahoma	7	21,799	0	0
Pawnee	2	15	1	0
Pontotoc	2	153	0	0
Pottawatomie	2	1,517	0	0
Seminole	9	3,778	1	0
Stephens	4	220	0	1
Tulsa	3	53	1	0
Wagoner	4	75	2	0
Caddo	1	75	0	0
Hughes	3	1,089	1	0
Jefferson	2	50	0	0
Okfuskee	1	0	1	0
Pittsburg	1	0	1	0
Total June	74	30,617	28	5
Total May	89	63,624	29	6
Difference	15	33,007	1	1

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Oklahoma	42	61	103
Hughes	5	12	17
Pontotoc	0	9	15
Seminole	4	10	14
Latimer	0	2	2
Lincoln	0	3	3
Pottawatomie	6	18	24
Osage	12	17	29
Payne	3	10	13
Pawnee	0	1	1
Creek	7	41	48
Kay	3	2	5
Noble	4	2	6
Garfield	1	4	5
Grant	1	0	1
Kingfisher	0	1	1
Logan	0	3	3
Blaine	0	1	1
Alfalfa	0	1	1
Custer	1	0	1
Roger Mills	0	2	2
Woodward	0	1	1
Texas	0	1	1
Wagoner	0	9	9
Muskogee	4	10	14
Tulsa	4	10	14
Okmulgee	6	19	25
McIntosh	0	1	1
Okfuskee	3	6	9
Cherokee	1	0	1
Haskell	0	2	2
Pittsburg	2	3	5
Carter	4	5	9
Grady	0	3	3
Jefferson	0	2	2
Stephens	4	12	16
Caddo	0	12	12
Comanche	0	4	4
Coal	0	2	2
Tillman	0	1	1
Beckham	0	5	5
Atoka	0	2	2
Greer	0	2	2
Kiowa	0	2	2
Marshall	7	15	22
McCurtain	0	2	2
Pushmataha	0	2	2
Washita	1	2	3
Total June	131	335	466
Total May	113	322	435
Difference	18	13	31

WELLS COMPLETED

BECKHAM COUNTY

33-11-22w Mid-Continent O. & G. Co. 1.. dry

Wells completed 1
Dry 1

CARTER COUNTY

19-1s-2w Lundy et al 1 ..... dry
22-4s-2w Schermerhorn-Ardmore 8 45

Wells completed 2
Production 45
Dry 1

CREEK COUNTY

7-19- 8 Fogle & Marble 1 6
3-19- 9 A. W. Swift et al 1 ..... gas
30-19- 9 Dean et al 1 ..... dry
19-19- 9 Dean et al 1 ..... dry
29-19- 9 Johnson Oil & Ref. 1 140
6-17- 7 Comail Oil Co. 1 ..... dry
23-17-11 McCurry 2 130
17-17-10 Curtis Oil Co. 1 ..... dry
36-17-11 Wise & Archer 1 ..... dry
4-16- 7 Magnolia Pet. Co. 7 ..... dry
22-19- 9 Hazelwood et al 1 ..... gas
22-15- 8 Deep Rock Oil Co. 1 ..... dry
30-17-12 W. G. Banks et al 1 ..... dry

Wells completed 13
Production 266
Dry 8
Gas 2
Gas production 5,650,000

LINCOLN COUNTY

1-15-6 Gypsy Oil Co. 1 227
3-12-5 Sovereign Oil Co. 1 ..... dry

Wells completed 2
Production 227
Dry 1

MARSHALL COUNTY

9-7s-6 Curry 1 ..... dry
25-5s-5 Taylor 1 ..... dry
5-8s-6 Reba Neff ..... dry

Wells completed 3
Dry 3

MUSKOGEE COUNTY

35-16-15 G. S. Wilson 5 ..... gas
8-15-18 J. M. Foltz 1 20
4-15-18 J. V. Dunbar 2 ..... gas
13-15-15 Goodman & Cantrell 1 ..... dry

Wells completed 4
Production 20
Gas 2
Gas production 16,000,000
Dry 1

OSAGE COUNTY

24-24- 7 Peters Pet. Corp. et al 1 1200
33-22-12 R. S. Duffield ..... dry

Wells completed 2
Production 1200
Dry 1

OKMULGEE COUNTY

25-13-13 Wigton-Long et al 1 ..... dry
21-14-11 G. A. Simmons 2 30
10-14-14 J. L. Selby et al 7 ..... dry
14-14-14 J. E. Wallace 6 5
12-14-12 Amerada Pet. Corp. et al 1 .... dry
33-14-14 W. B. Coyle 3 ..... dry

Wells completed 6
Production 35
Dry 4

OKLAHOMA COUNTY

3-11-3w Phillips Pet. Co. 1, 5 hrs. 6536
22-11-3w Phillips Pet. Co. 1, 4½ hrs. .. 210
3-11-3w Phillips Pet. Co. 1, 4 hrs. 3232
3-11-3w Slick et al 11, 4 hrs. 3675
34-13-3w Wilcox O. & G. 1, 1½ hrs. ...2210
35-12-3w I. T. I. O. 7, 5 hrs. 2445
15-11-3w Slick et al 3, 8 hrs. 2491

Wells completed 7
Production 21,799

PAWNEE COUNTY

29-20-10 Okla. Power & Water 134 .... dry
34-21- 8 Young et al 1 15

Wells completed 2
Production 15
Dry 1

POTTOTOC COUNTY

16-5-6 Pioneer Oil Co. 1 96
31-5-5 Stanolind Oil & Gas 57

Wells completed 2
Production 153

POTTAWATOMIE COUNTY

25-6-4 Barnsdall Oil Co. 1 1473
25-7-4 Mid-Continent Pet. Corp. 1 44

Wells completed 2
Production 1517

SEMINOLE COUNTY

3-8-5 Empire O. & R. Co. 5 245
19-7-8 Empire O. & R. Co. 4 3572
19-7-8 Empire O. & R. Co. 2 56
19-7-8 Empire O. & R. Co. 4 402
30-7-8 Empire O. & R. Co. 1 371
35-9-6 Sinclair Prairie 4 10
1-8-6 Sinclair Prairie 1 112
29-8-7 Anderson & Kerr 1 ..... dry
19-7-8 Empire O. & R. Co. 2 10

Wells completed 9
Production 3778
Dry 1

STEPHENS COUNTY

21-2s-7w Pace et al 11 175
2-2s-5w Chambers 2 ..... gas
3-2s-5w Pace et al 4 10
3-2s-5w Gilbert 2 35

Wells completed 4
Production 220
Gas 1
Gas production 5,000,000

TULSA COUNTY

13-19-13 Owens et al 3 3
27-17-13 Cummings et al 1 50
9-19-14 Lambert et al ..... dry

Wells completed 3
Production 53
Dry 1

WAGONER COUNTY

13-17-15 Sewell et al 2 ..... dry
26-18-15 Sheridan Oil Co. 2 50
14-18-15 La Pleire 1 ..... dry
26-18-15 Martin 1 25

Wells completed 4
Production 75
Dry 2

CADDO COUNTY

6-5-9w Mid-Kansas O. & G. Co. et al 6 75

Wells completed 1
Production 75

HUGHES COUNTY

1-7-8 Eason Oil Co. 1 ..... dry
20-7-8 Empire O. & R. Co. 1 909
15-7-8 Limestone O. & G. Co. 1 180

Wells completed 3
Production 1089
Dry 1

JEFFERSON COUNTY

34-6s-5w Beck et al 2 25
34-6s-5w Beck et al 1 25

Wells completed 2
Production 50

OKFUSKEE COUNTY

8-11-11 Moffett et al 4 ..... dry

Wells completed 1
Dry 1

PITTSBURG COUNTY

34-7-14 Tape Oil Co. 1 ..... dry

Wells completed 1
Dry 1

East Central Texas

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Anderson	0	0	0	0	1	1	2
Angelina	0	0	0	0	0	2	2
Buwie	0	0	0	0	0	3	3
Cherokee	2	80	1	0	3	7	10
Delta	0	0	0	0	0	2	2
Ellis	0	0	0	0	1	4	5
Franklin	0	0	0	0	1	1	2
Gregg	355	22,504	0	0	176	150	326
Henderson	0	0	0	0	0	1	1
Hill	0	0	0	0	0	1	1
Hopkins	0	0	0	0	1	1	2
Kaufman	0	0	0	0	0	1	1
Lamar	0	0	0	0	0	3	3
Leon	0	0	0	0	1	1	2
Morris	1	0	1	0	0	2	2
Nacogdoches	1	0	1	0	2	0	2
Newton	0	0	0	0	0	1	1
Polk	1	0	1	0	0	3	3
Rains	0	0	0	0	0	1	1
Red River	0	0	0	0	0	3	3
Robertson	0	0	0	0	0	3	3
Rusk	184	16,203	4	0	95	121	216
Smith	40	2,497	1	0	24	32	56
Titus	0	0	0	0	0	1	1
Upshur	47	3,450	0	3	16	35	51
Van Zandt	4	274	1	0	2	9	11
Wood	0	0	0	0	1	2	3
Total June	638	39,008	10	0	323	390	713
Total May	499	34,074	26	1	333	274	707
Difference	139	4,934	16	1	10	16	6

Note: Production figure based on various time limits and through different chokes.

WELLS COMPLETED

CHEROKEE COUNTY

Mustang Oil Co. et al's No. 1 Decker and Whiteman ..... abd
Mid-Kansas Oil & Gas Co.'s No. 15 M. M. Cross, through 2½-in. tubing 80

Wells completed 2
Initial production 80
Abandoned 1

GREGG COUNTY

Amerada Pet. Corp.'s No. 5 Continental, through 1-in. tubing (¼ hr.) 18
Atlantic and Sun Oil Co.'s No. 1-C R. C. Barnswill, through tapered tubing .. 22
Atlantic Oil & Prod. Co.'s No. 5 McBee Fisher, through tapered tubing 22
Barnsdall and Sun Oil Co.'s No. 7 Bingham, through 2½-in. tubing 111
Danciger Oil & Ref. Co.'s No. 2 G. S. Mattox, through 2-in. tubing choke (10 min.) 18
Empire Gas & Fuel Oil Co.'s No. 3 Bumpass, through open tubing (¼ hr.) 40
Empire Gas & Fuel Oil Co.'s No. 2 J. T. Jeter, through 2½-in. tubing, (¼ hr.) 43
Empire Gas & Fuel Oil Co.'s No. 9 Jeter, through 2½-in. tubing (¼ hr.)..... 42
F. H. E. Oil Co.'s No. 5 J. E. Christian, through various chokes, per day .. 62
F. H. E. Oil Co.'s No. 6 J. E. Christian, through 1-in. tubing choke, (40 min.). 60
Fain & McGaha's No. 2 R. Corbin, through 1-in. tubing choke (½ hr.).. 70
Gulf Prod. Co.'s No. 5 Bozeman, through ⅝-in. tubing choke 80
Gulf Prod. Co.'s No. 10 F. C. Fishburn, through ⅝-in. tubing 80
P. L. Hoffman et al's No. 2 Phillips, through 2½-in. tubing (¼ hr.)..... 40
Humble Oil & Ref. Co.'s No. 9 W. R. Hughes, through ⅝-in. tubing choke . 82
B. K. Isaac's No. 2 T. B. Harris, through 1-in. tubing choke 60
Kewanee Oil & Gas Co.'s No. 11 Fee, through 1-in. tubing choke (¼ hr.).. 45
Magnolia Petroleum Co.'s No. 11 Everett Estate, through 2-in. tubing 232
Magnolia Pet. Co.'s No. 16 J. W. Fee, through 2-in. tubing 191
Magnolia Pet. Co.'s No. 2 Tate, through 2-in. tubing 131
Meridian Oil Co.'s No. 4 T. W. Lee, through 2½-in. tubing (¼ hr.) 64
Midas Oil Co.'s No. 3 A. V. Bacle, through various chokes 62
Midas Oil Co.'s No. 4 A. V. Bacle, through 1-in. tubing choke 100
Pilot Oil Co.'s No. 4 T. B. Harris, through open tubing 250
Roeser & Pendleton's No. 2 Fenton, through open tubing 72
Selby & Lews' No. 4-B Snavely heirs, through 1-in. tubing choke 115
Selby Oil & Gas Co.'s No. 5-D Snavely heirs, through tubing 82
Shell Pet. Corp.'s No. 4 Bassham, through tapered tubing (½ hr.) 10
Simms and Stanolind Oil & Gas Co.'s No. 5 A. J. Tuttle, through open 2-in. tubing 120
Sinclair Prairie Oil Co.'s No. 6-A J. W. Akin, through 2½-in. tubing (¼ hr.) 59
Sinclair Prairie Oil Co.'s No. 5-B J. W. Akin, through 2½-in. tubing (14 min.) 59
Stanolind Oil & Gas Co.'s No. 3-C M. B. Harley, through 1½-in. tubing choke (20 min.) 29
Sun Oil Co.'s No. 7 J. W. Adkins through tapered tubing 46
Sun Oil Co.'s No. 6 Tate, through 2-in. tubing 96
Sun Oil Co.'s No. 3-B Tooke, through tapered tubing 36
Superior Oil Co.'s No. 7 A. Jones, through 1-in. tubing choke 85
Superior Oil Co.'s No. 5-A Pritchard, through 1-in. tubing choke (¼ hr.) . 47
Tidal Oil Co.'s No. 11 A. Castleberry, through 2-in. tubing (10 min.) 14
Yount Lee Oil Co.'s No. 2 A. A. Castleberry, through 11/16-in. tubing choke 31
Yount Lee Oil Co.'s No. 3-A J. C. McKinley, through 11/16-in. tubing choke 81
Adams and Lyles' No. 1 L. Howard, through pinched tubing, per day 59
Atlantic Oil & Prod. Co.'s No. 4 Clayton heirs, through tapered tubing ... 22
Atlantic and Byrd-Frost's No. 7 M. B. Hughey, through tapered tubing 22
Continental Oil Co.'s No. 1 A. King, through open tubing (¼ hr.) 45
Cranfill & Reynolds' No. 2 R. L. Martin, through open tubing (¼ hr.) 42
John Owens' No. 1 M. T. Cole, through open tubing (½ hr.) 60
Empire Gas & Fuel Co.'s No.1 F. Lockhart, through 2-in. tubing (¼ hr.)... 50
Empire Gas & Fuel Oil Co.'s No. 2 Walker, through 2-in. tubing (¼ hr.). 44
Everts Drilling Co.'s No. 1 Cooke, through pinched tubing, per day 59
Gulf Prod. Co.'s No. 5 C. Brown, through ⅝-in. tubing choke 87
Gulf Prod. Co.'s No. 8 M. T. Cole, through ⅝-in. tubing choke 72
Gulf Prod. Co.'s No. 9 Culver, through ⅝-in. tubing 37
Gulf Prod. Co.'s No. 22 Hilburn, through ⅝-in. tubing 85
Gulf Prod. Co.'s No. 10 W. Holt, through ⅝-in. tubing choke 70
Koberg Oil Co.'s No. 1 L. Martin, through ⅝-in. tubing 70
Magnolia Pet. Co.'s No. 9 L. A. Griffin, through 1-in. tubing (5 min.) ... 56
Magnolia Pet. Co.'s No. 2 Laird-Grim, through 2-in. tubing 132
Magnolia Pet. Co.'s No. 5 John Radford, through 1-in. tubing choke 163
Kniventon Oil Co.'s No. 1 W. P. Crews, through 1-in. tubing choke (½ hr.). 65
Republic Prod. Co.'s No. 3 Clayton heirs, through open tubing (¼ hr.) 45
Shell Pet. Corp.'s No. 5 J. S. King, through tapered tubing (¼ hr.) 7
Shell Pet. Corp.'s No. 6 J. S. King, through tapered tubing (¼ hr.) 8
Shell Pet. Corp.'s No. 4 B. F. Laird, through tapered tubing (½ hr.) 16
Shell Pet. Corp.'s No. 4 J. T. Neal, through tapered tubing (¼ hr.)..... 11
Sinclair Prairie Oil Co.'s No. 20 M. T. Cole, through 2½-in. tubing 59
Sinclair Prairie Oil Co.'s No. 22 M. T. Cole, through 2½-in. tubing (¼ hr.).. 40
Sinclair Prairie Oil Co.'s No. 24 M. T. Cole, through tubing 59
Sinclair Prairie Oil Co.'s No. 16-A A. A. King, through open 2½-in. tubin (13 min.) 50
Sinclair Prairie Oil Co.'s No. 17-A A. A. King, through open tubing (¼ hr.).. 59
Sinclair Prairie Oil Co.'s No. 18-A A. A. King, through open tubing (13 min.).. 50
Sinclair Prairie Oil Co.'s No. 14-B A. A. King, through open tubing (¼ hr.).. 59

Sinclair Prairie Oil Co.'s No. 15-B A. A. King, through open tubing (10 min.).. 50
Sinclair Prairie Oil Co.'s No. 16-B A. A. King, through open tubing (12 min.). 60
Sinclair Prairie Oil Co.'s No. 3-B A. A. King, through open tubing (10 min.). 50
Sinclair Prairie Oil Co.'s No. 4 J. E. Lawther, through open tubing (½ hr.) 50
Sinclair Prairie Oil Co.'s No. 5 A. A. Lockhart, through open tubing (½ hr.) 35
Sinclair Prairie Oil Co.'s No. 6 A. A. Lockhart, through open tubing (¼ hr.) 30
Sun Oil Co.'s No. 3 J. S. Elder, through open tubing, per day 50
The Texas Co.'s No. 2 M. T. Cole, through 2-in. tubing 138
Tidal Oil Co.'s No. 11 Hughey, through open casing and tubing 204
Tidal Oil Co.'s No. 7 King, through open casing and tubing 60
Standard Oil Co. of Kansas' No. 1 J. A. Knowles, through open 2½-in. tubing (¼ hr.) 46
Harcker Oil Co.'s No. 1 Alexandria, through 1-in. tubing choke 170
Everts et al's No. 1 D. M. Barton, by heads, per day 50
Weaver-Crim Corp.'s No. 6 Ben Laird, through open tubing (½ hr.) 40
Alma Pet. Co.'s No. 3 J. L. Younse, through 1-in. tubing choke 60
Amerada Pet. Co.'s No. 3 Burnside, through ⅝-in. tubing 84
Amerada Pet. Corp.'s No. 2 Tooke, through ⅝-in. tubing choke 74
Arkansas Fuel Oil Co.'s No. 1 Burnside, through 2½-in. tubing (½ hr.) 47
Arkansas Fuel Oil Co.'s No. 2-A Taylor Lee, through 2½-in. tubing (¼ hr.) 31
Arkansas Fuel Oil Co.'s No. 1 E. M. Whatley, through 2½-in. tubing (¼ hr.) 37
Atlantic Oil & Prod. Co.'s No. 8 Bacle, through tapered tubing 21
Atlantic Oil & Prod. Co.'s No. 7-A Burnside, through ⅝-in. tubing choke 22
Atlantic Oil & Prod. Co.'s No. 5 T. B. Harris, through tapered tubing 22
Atlantic and Sun Oil Co.'s No. 6 Hayes, through tapered tubing 65
Atlantic Oil & Prod. Co.'s No. 7 T. W. Lee, through tapered tubing 21
Atlantic Oil & Prod. Co.'s No. 4 J. Moore, through ⅝-in. tubing 185
Atlantic Oil & Prod. Co.'s No. 5 J. C. McKinley, through tapered tubing... 21
Atlantic Oil & Prod. Co.'s No. 2-A Tooke, through tapered tubing 22
Atlantic and Wadley's No. 8 M. Turner, through tapered tubing 23
Atlantic and Sun Oil Co.'s No. 4 Wm. Anderson, through 2½-in. tubing 186
Bay Oil Corp.'s No. 3 J. M. Wheeler, through 1½-in. tubing (¼ hr.) 64
J. E. Beard et al's No. 3 Farrell, through open tubing 70
Bridwell Oil Co.'s No. 2 Lockett, through 1-in. tubing (¼ hr.) 30
Columbia Oil & Gas Co.'s No. 2 A. Christian, through 1-in. tubing 86
Coastal Drilling Co.'s No. 2 Alexander, through 2-in. tubing (½ hr.) 62
Cox and Hamon's No. 3-A fee, through various chokes 59
Cox and Hamon and Williams' No. 2 C. Rodden, through 2½-in. tubing 170
Deep Rock Oil Co.'s No. 5 H. Pritchard, through 1-in. tubing 120
Devonian Oil Co.'s No. 6 Ingram, through ⅝-in. tubing choke 120
F. Dodson et al's No. 1 Bacle, through ⅝-in. tubing choke 80
East Texas Finance Co.'s No. 2 George Anderson, through 1-in. tubing choke. 100
H. M. Edwards et al's No. 2 Starr Estate, through 2½-in. tubing 110
Empire Gas & Fuel Oil Co.'s No. 3 T. W. Lee, through 2-in. open tubing (¼ hr.) 26
Gulf Prod. Co.'s No. 4 Fonville, through ⅝-in. tubing choke 80
Gulf Prod. Co.'s No. 9 Sheppard, through 1-in. tubing choke 80
Hamil & Smith's No. 1-A C. B. Everett, through 1-in. tubing choke 80
Howard Pet. Co.'s No. 4 A. Davis, through 1-in. tubing choke (½ hr.)... 45
Humble Oil & Ref. Co.'s No. 6 Killingsworth, through ⅝-in. tubing choke... 83
Kewanee Oil Co.'s No. 6 fee, through 2½-in. tubing choke (¼ hr.) 45
Magnolia Pet. Co.'s No. 6 Jones, through 2-in. open tubing 132
Magnolia Pet. Co.'s No. 4 J. A. Parnell, through 2-in. tubing 136
Marine Prod. Co.'s No. 3 W. H. York, through 1-in. tubing choke 75
J. H. Massey et al's No. 4 Orr, through 2-in. tubing (10 min.) 40
W. A. McCommas' No. 2 George Anderson, through 1-in. tubing choke (32 min.) 59
Roeser & Pendleton's No. 1-B W. R. Nicholson, through 2-in. tubing (32 min.) 59
Red Star Oil Co.'s No. 3 W. D. Anderson, through ⅝-in. tubing choke.... 70
Roeser & Pendleton's No. 2-B W. R. Nicholson ..... No gauge
Selby & Lewis' No. 6 Ingram, through 1-in. tubing choke (¼ hr.) 47
Shell Pet. Corp.'s No. 6 C. H. Slaton, through tapered tubing (¼ hr.)..... 10
Showers & Moncrief's No. 1 A. D. Bacle, through ⅝-in. tubing choke 80
Silver Star Oil Co.'s No. 2 George Anderson, through 1-in. tubing choke 90
Simms and Stanolind Oil & Gas Co.'s No. 10-B J. J. Flewellen, through 2-in. tubing 80
Sinclair Prairie Oil Co.'s No. 7 Isley, through 2½-in. tubing (20 min.) 59
Sinclair Prairie Oil Co.'s No. 6 J. R. Williams, through 2½-in. tubing (20 min.) 59
Stanolind-Simms and Peachblossom s No. 2 J. W. Akin, through 1½-in. open tubing (¼ hr.) 60
Stroube & Stroube's No. 2 Dumpass, through open tubing (10 min.) 50
Stroube & Stroube's No. 1 Anderson heirs, through various chokes, per day 59
Sun Oil Co.'s No. 2 Fuller, through tapered tubing 37
Tidal Oil Co.'s No. 6 W. E. Jones, through 2-in. open tubing (10 min.).. 30
C. Williams et al's No. 1 Brawley, through 1-in. tubing choke 62
Wise and Jackson et al's No. 3 R. Corbin, through 2½-in. open tubing 100
Woodley Pet. Co.'s No. 3 T. B. Harris, through 1-in. tubing choke 75
Yount Lee Oil Co.'s No. 3 Rodden, through 11/16-in. tubing choke 71
Yount Lee Oil Co.'s No. 3-A E. M. Watley, through 11/16-in. tubing 79
J. C. Board's No. 2 E. Muckelroy, through ⅝-in. tubing choke (¼ hr.) . 20
Canadian Oil Prod. Co.'s No. 2 Jenkins, through tubing (½ hr.) 60
A. C. Deck's No. 1 G. Davis, through pitched tubing, per day 54
Golding & Murchison's No. 6 L. P. Griffin, pinched, per day 59
Gulf Prod. Co.'s No. 9 Alexandria, through ⅝-in. tubing 90
Gulf Prod. Co.'s No. 9 M. T. Cole, through ⅝-in. tubing 80
Gulf Prod. Co.'s No. 11 G. W. Culver, through ⅝-in. tubing 64
Gulf Prod. Co.'s No. 21 Hilburn, through ⅝-in. tubing choke 40
Gulf Prod. Co.'s No. 23 Hilburn, through ⅝-in. tubing 85
Gulf Prod. Co.'s No. 2 A. Nichols, through ⅝-in. tubing 22
Gulf Prod. Co.'s No. 3 R. H. Still, through ⅝-in. tubing 60
Gulf Prod. Co.'s No. 4 R. H. Still, through ⅝-in. tubing 40
Magnolia Pet. Co.'s No. 1 Laird-Crim, through 1-in. tubing (¼ hr.) 38
O'Brien et al's No. 3 George Daniels, through 1-in. tubing (¼ hr.) 40
Sells Pet. Corp.'s No. 3 E. Sibley, through pinched tubing, per day 59
Shell Pet. Corp.'s No. 4-B Bivens, through tapered tubing (½ hr.) 16
Sinclair Prairie Oil Co.'s No. 6 S. G. Andrews, through open tubing (10 min.) 25
Sinclair Prairie Oil Co.'s No. 19-A A. A. King, through open tubing (¼ hr.) 50
Sinclair Prairie Oil Co.'s No. 25 A. A. King, through open tubing (¼ hr.).. 50
Sinclair Prairie Oil Co.'s No. 5-B A. A. King, through open tubing (10 min.). 40
Sinclair Prairie Oil Co.'s No. 4-B A. A. King, through open tubing (10 min.). 25
Stanolind O. & G. Co.'s No. 1-B E. L. Walker, through 1½-in. tubing (½ hr.) 57
Sun Oil Co.'s No. 6 M. T. Cole, through tapered tubing 52
Sun Oil Co.'s No. 4 G. Reese, through tapered tubing 62
The Texas Co.'s No. 5 R. B. Walls, through open tubing 160
Tidal Oil Co.'s No. 5 Lacy, through open tubing 120
Winston Oil Co.'s No. 5 Paul Jones, through open tubing 25
Ark. Fuel Oil Co.'s No. 3-B Harrison, through 1-in. tubing choke (¼ hr.). 21
Ark. Fuel Oil Co.'s No. 4-A J. C. McKinley, through tubing choke (¼ hr.) 16
Atlantic Oil & Prod. Co.'s No. 6 Bender, through tapered tubing 21
Atlantic Oil & Prod. Co.'s No. 7-B Burnside, through tapered tubing 20
Atlantic Oil & Prod. Co.'s No. 8 Duncan, through tapered tubing 22
Atlantic Oil & Prod. Co.'s No. 10 Duncan, through tapered tubing 20
Atlantic Oil & Prod. Co.'s No. 4 Fuller, through tapered tubing 16
Atlantic Oil & Prod. Co.'s No. 2 Judge, through 2½-in. tubing 200
Bristow & Rowan's No. 4 W. A. Moore, through 2-in. open tubing (10 min.). 30
Byrd-Frost Oil Co.'s No. 3 J. J. Reppond, through open tubing (10 min.). 35
Central Drlg. Co. et al's No. 1 Castleberry, through 1-in. tubing choke (½ hr.) 45
Cranfill & Reynolds' No. 1 fee, through 1-in. tubing choke (¼ hr.) 25
Empire G. & F. Co.'s No. 7 Bender, through 1-in. tubing choke 88
Eslick & Bazzell's No. 1 J. H. Thomas, through 1-in. tubing choke 47
Fain & McGaha's No. 5 Bucknight, through various chokes (per day) .. 54
Gulf Prod. Co.'s No. 4 A. V. Bacle, through ⅝-in. tubing choke 84
Gulf Prod. Co.'s No. 6 Judge Estate, through ⅝-in. tubing choke 85
Gulf Prod. Co.'s No. 7 Judge Estate, through ⅝-in. tubing choke 87
Humble O. & R. Co.'s No. 1 H. Castleberry, through ⅝-in. tubing choke .. 68
Humble O. & R. Co.'s No. 4 G. W. Willingham, through ⅝-in. tubing choke. 24
Lucey Pet. Co.'s No. 6 R. Christian, through 1-in. tubing choke 84
Magnolia Pet. Co.'s No. 3 Brawley, through open tubing 128
Magnolia Pet. Co.'s No. 7 H. L. Foster, through open tubing 120
Magnolia Pet. Co.'s No. 3 Zeigler, through 2-in. tubing 144
Magnolia Pet. Co.'s No. 7 Zeigler, through open tubing 154
Margay Oil Co.'s No. 5 Corbin, through 1-in. tubing choke (¼ hr.) 32
Merrick, Inc.'s No. 3 Nicholson, through 2-in. tubing 105
Miller et al's No. 2 Jones, through various chokes 54
Pennsylvania O. & R. Co.'s No. 1 Bonner, through open tubing (½ hr.) ... 61
Pilot Oil Co.'s No. 7 T. B. Harris, through various chokes (per day) .. 54
Petroleum Finance Co.'s No. 3 Kensell, through 1-in. tubing choke 80
Roeser & Pendleton's No. 4-A Nicholson, through open tubing 35
Shell Pet. Corp.'s No. 9 Moore, through tapered tubing 15
Showers & Moncrief's No. 1-B A. C. Bale, through ⅝-in. tubing 85
Silver Star Oil Co.'s No. 3 George Alexander, through open tubing (½ hr.) 54
Simms and Stanolind O. & G. Co.'s No. 12-B Flewellen, through open tubing. 135
Simms and Stanolind O. & G. Co.'s No. 13-B Flewellen, through open tubing. 105
Sinclair Prairie Oil Co.'s No. 6 M. Lawson, through open tubing (¼ hr.) .. 54
Stanolind-Simms and Continental Oil Co.'s No. 6-A J. J. Flewellen, through 1½-in. tubing (½ hr.) 45
Stanolind-Simms and Peachblossom's No. 5 O. J. Albright, through 1½-in. tubing choke (¼ hr.) 47
Stanolind and Simms Oil Co.'s No. 5 P. McGeorge, through 1½-in. tubing choke (¼ hr.) 36
Sun Oil Co.'s No. 8 Akins, through open tubing 97
Sun and Atlantic Oil & Prod. companies' No. 2 M. Thomas, through tapered tubing 45
Tidal Oil Co.'s No. 7 A. Davis, through open 2-in. tubing (10 min.) 22
Tidal Oil Co.'s No. 8 Lake Devernia, through 2-in. tubing (10 min.) 22
Yount Lee Oil Co.'s No. 5 Davis, through 11/16-in. tubing choke 31
Yount Lee Oil Co.'s No. 3-D J. C. McKinley, through 11/16-in. tubing choke 40
Adams & Lyles' No. 2 L. Howard, pinched (per day) 54
Alexander & Rassmussen's No. 1 Dixon, through ⅝-in. tubing choke 135
Atlantic-Byrd Frost's No. 8 Hughey, through tapered tubing 22
Atlantic-Byrd Frost's No. 5 R. Whaley, through tapered tubing 22
Burnham & Johnston's No. 1 Jackson-Sample, through open tubing 50
Cal-Tex Oil Co.'s No. 2 L. D. Crim, through ⅝-in. tubing choke 85
Canadian Oil Co.'s No. 3 Hilburn, through open tubing (¼ hr.) 40
Empire G. & F. Oil Co.'s No. 3 V. L. Taylor, through ⅝-in. tubing choke (¼ hr.) 28
Galvez Oil Corp.'s No. 3 Cole, through ⅝-in. tubing choke (¼ hr.) 28
Glasscock et al's No. 2 Goforth, pinched (per day) 54
Gulf Prod. Co.'s No. 7 Brown, through ⅝-in. tubing choke 92
Gulf Prod. Co.'s No. 9 Brown, through ⅝-in. tubing choke 100
Gulf Prod. Co.'s No. 7 M. T. Cole, through ⅝-in. tubing choke 80
Gulf Prod. Co.'s No. 10 Culver, through ⅝-in. tubing choke 45
Gulf Prod. Co.'s No. 25 Hilburn, through ⅝-in. tubing choke 90
Houston Oil Co.'s No. 2 M. T. Cole, through tubing 128
Houston Oil Co.'s No. 4 S. B. Hall, through open tubing 90
Jones & O'Brien's No. 6 Hughes Ross, through ⅝-in. tubing choke (¼ hr.) 25
Kniveton Oil Co.'s No. 2 Crews, through 1-in. tubing choke (½ hr.) 40
Magnolia Pet. Co.'s No. 1 H. P. Hale, through 1-in. tubing choke (5 min.). 55
Magnolia Pet. Co.'s No. 3 Laird-Crim, through 1-in. tubing choke 135
Mullendore & Berry's No. 1 W. W. Elder, through open tubing (½ hr.) .. 70
Ruston Drlg. Co.'s No. 3 Roger Lacy, through 1-in. tubing choke 50
Selby O. & G. Co.'s No. 2 M. T. Cole, through 1-in. tubing choke (½ hr.).. 47
Shell Pet. Corp.'s No. 17 Watson, through tapered tubing (½ hr.) 10
Sinclair Prairie Oil Co.'s No. 21-A A. A. King, through 1½-in. tubing (13 min.) 30
Sinclair Prairie Oil Co.'s No. 26-A A. A. King, through 1½-in. tubing choke (¼ hr.) 54
Stanolind O. & G. Co.'s No. 4 Clayton Heirs, through 1½-in. tubing choke.. 72
Sun Oil Co.'s No. 4 M. Strong, through tapered tubing 53
Tidal Oil Co.'s No. 9 Bivens, through open tubing 120
Tidal Oil Co.'s No. 12 Bivens, through open tubing 108
Tidal Oil Co.'s No. 9 King, through open tubing 63
M. K. Towns' No. 3 Giffin Davis, through 1½-in. tubing choke (½ hr.) 45
T. J. Tucker's No. 1 Mary Rufus, pumping 7
Wells & Ganns' No. 4 M. Charles, through pinched tubing (per day) .. 54
Amerada Pet. Corp.'s No. 5 Burnside, through ⅝-in. tubing choke (¼ hr.). 37
Ark. Fuel Oil Co.'s No. 3-A Taylor Lee, through 1-in. tubing (¼ hr.) 37
Ark. Fuel Oil Co.'s No. 1 B. Rodden, through 1-in. tubing choke (¼ hr.).. 35
Atlantic Oil & Prod. Co.'s No. 2 T. B. Harris, through tapered tubing 21
Atlantic Oil & Prod. Co.'s No. 8 Judge, through pinched tubing 33
Atlantic Oil & Prod. Co.'s No. 16 J. C. Judge, through tapered tubing (¼ hr.) 8
Atlantic and Wadley's No. 4 T. W. Lee, through tapered tubing 30
Atlantic Oil & Prod. Co.'s No. 9 J. M. Moore, through tapered tubing 35
Atlantic Oil & Prod. Co.'s No. 3 H. Pritchard, through tapered tubing .. 20
Atlantic and Wadley's No. 9 Turner estate, through tapered tubing 30
Atlantic and Sun Oil Co.'s No. 2-C Barnswell, through tapered tubing .. 20
Atlantic and Sun Oil Co.'s No. 12 M. Hays, through tapered tubing (⅛ hr.) 16
Beard et al's No. 4 Farrell, through various chokes (per day) 54
Columbia O. & G. Co.'s No. 2 Doby, through 1-in. tubing choke 110
Cox & Hamon's No. 2-A fee, through 1-in. tubing choke (¼ hr.) 30
Cox & Hamon's No. 15 L. A. Rodden, through 2½-in. tubing choke 150
Deep Rock Oil Co.'s No. 1-A H. Pritchard, through 1-in. tubing choke (½ hr.) 45
Dyck Oil Co.'s No. 3 J. M. Christian, through open tubing 126
East Texas Oil Co.'s No. 4 L. White, through 2½-in. tubing (16 min.) 50
Empire G. & F. Oil Co.'s No. 3 J. T. Jeter, through 2-in. tubing (¼ hr.) 40
Empire G. & F. Oil Co.'s No. 4 T. W. Lee, through 2½-in. tubing choke (¼ hr.) 32
F. H. E. Oil Co.'s No. 4 J. E. Christian, through 1-in. tubing choke 100
Foshee et al's No. 1 Stencil, through 2½-in. tubing choke (20 min.) 32
Howard Pet. Co.'s No. 5 G. Davis, through 1-in. tubing choke (18 min.) 52
Kewanee O. & G. Co.'s No. 7 fee, through 1-in. tubing choke (¼ hr.). 45
Lanier & Collins' No. 2 Collins, through 1-in. tubing choke (27 min.) 54
Lucey Petroleum Co.'s No. 5 R. Christian, through ⅝-in. tubing choke ... 128
Magnolia Petroleum Co.'s No. 3 A. J. Green, through open 2-in. tubing ... 105
Magnolia Petroleum Co.'s No. 4 Foinville, through 2-in. tubing 150
Manson Oil Co.'s No. 2 Barrett, through 1-in. tubing choke, ¼ hr. 26
Joe Manzell et al's No. 1 Walker, through 2-in. tubing choke 83
Meridian Oil Co.'s No. 5 T. W. Lee, through 2½-in. tubing choke, ¼ hr. 50
Midas Oil Co.'s No. 5 Bacle, through 1-in. tubing choke 85
Pilot Oil Co.'s No. 6 T. B. Jarvis, through ⅝-in. tubing choke, ¼ hr.. 20
Pilot Oil Co.'s No. 1 P. McGeorge, through open tubing, per day 54
H. B. Herring's No. 1 W. L. Holland, through various chokes, per day 54
S. D. Reynolds' No. 1 W. R. Nicholson, through open tubing 115
S. Rhodes Drilling Co.'s No. 1 J. E. Christian, through 1-in. tubing choke 85
Selby Oil & Gas Co.'s No. 5-B Snavely, through tapered tubing, ½ hr. 28
Sinclair Prairie Oil Co.'s No. 4 York, through 2½-in. open tubing, 10 min. 35
Shell Petroleum Corp.'s No. 8 J. Moore, through tapered tubing, ½ hr. 13
Shell Petroleum Corp.'s No. 10 J. Moore, through tapered tubing, ½ hr. 15
Stanolind, Simms and Peachblossom's No. 3 J. W. Alkin, through 1½-in. tubing choke 159
Stanolind and Simms Oil Co.'s No. 4-C J. J. Flewellen, through 1½-in. tubing choke, ¼ hr. 37
Stroube and Stroube's No. 2 A. Harris, through tapered tubing 23
Sun Oil Co.'s No. 7 J. C. McKinley, thorugh tapered tubing 47
Sun Oil Co.'s No. 4-B A. Tooke, through 2-in. open tubing 95
Superior Oil Co.'s No. 10 Ingram, through 1-in. tubing choke, ½ hr. 45
Tidal Oil Co.'s No. 12 Castleberry, through 2-in. open tubing, 10 min. 12
Tidal Oil Co.'s No. 6 B. Moore, through 2-in. tubing, 10 min. 22
J. O. Whittington's No. 3 R. Christian, through 1-in. tubing choke, ½ hr. .. 50
Yount Lee Oil Co.'s No. 6 M. Jones, through 11/16-in. tubing choke 78
Yount Lee Oil Co.'s No. 3-B M. Smith, through 11/16-in. tubing choke 38
W. N. Angle's No. 2 Clayborn, through pinched tubing, per day 54
Arkansas Fuel Oil Co.'s No. 3 Donaldson, through ⅝-in. tubing choke, ½ hr. .. 49
Arkansas Fuel Oil Co.'s No. 4 Hughey-Ross, through 1-in. tubing choke, ¼ hr. 21
Barnsdall Oil Co.'s No. 3 John Douglass, through 1-in. tubing choke, ½ hr. 73
W. C. Turnbow's No. 1 Florence, through pinched tubing, per day 54
Canadian Oil Co.'s No. 4 Jenkins-Hilburn, through open tubing, ½ hr. .. 65
Canadian Oil Co.'s No. 4 Jenkins-Hilburn, through open tubing, ½ hr. .. 65
Continental Oil Co.'s No. 6 C. C. Crews, through open tubing, 25 min. 54
Cranfill & Reynolds' No. 1 L. Howard, through pinched tubing, 24 hrs. 15
Empire Gas & Fuel Oil Co.'s No. 4 A. Lockhart, through 2-in. choke on 2½-in. tubing, ¼ hr. 40
Gulf Prod. Co.'s No. 7 Alexander, through ⅝-in. tubing choke 80
Gulf Prod. Co.'s No. 6 C. Brown, through ⅝-in. tubing choke 120
Gulf Prod. Co.'s No. 8 C. Brown, through ⅝-in. tubing choke 80
Gulf Prod. Co.'s No. 10 C. Brown, through ⅝-in. tubing choke 90
Gulf Prod. Co.'s No. 6 M. Charles, through ⅝-in. tubing choke 72
Gulf Prod. Co.'s No. 24 Hilburn Estate, through ⅝-in. tubing 75
Gulf Prod. Co.'s No. 26 Hilburn, through ⅝-in. tubing choke 78
Gulf Prod. Co.'s No. 11 W. Holt, through ⅝-in. tubing choke 70
Gulf Prod. Co.'s No. 3 J. S. King, through ⅝-in. tubing choke 78
Liner, Inc.'s No. 1-C W. H. Warlick, through open tubing, ½ hr. 100
Louisiana Oil & Ref. Co.'s No. 3 Griffin, through 1-in. tubing choke, ¼ hr. 45
McVey et al's No. 1 Kelly Dixon, through pinched tubing, per day 54
Magnolia Pet. Co.'s No. 8 A. Hicks, through 1-in. tubing choke 104
Magnolia Pet. Co.'s No. 1 N. Towles, through 1-in. tubing choke 140
Navarro Oil Co.'s No. 2 E. C. Green, through pinched tubing, per day 6
Petroleum Finance Co.'s No. 3 Laird and Crim, through 1-in. tubing choke ... 125
Republic Prod. Co.'s No. 4 Clayborn Heirs, through 1-in. tubing choke, ½ hr. 42
Shell Pet. Corp.'s No. 3-A B. F. Laird, through tapered tubing, ½ hr. 20
Shell Pet. Corp.'s No. 16 Watson, through tapered tubing, ¼ hr. 7
Sinclair Prairie Oil Co.'s No. 7 S. G. Andrews, through open tubing, ¼ hr. 50

Sinclair Prairie Oil Co.'s No. 8 S. G. Andrews, through open tubing, 10 min. 30
Sinclair Prairie Oil Co.'s No. 23 Cole, through open tubing 110
Sinclair Prairie Oil Co.'s No. 25 Cole, through open tubing, 40 min. 54
Sinclair Prairie Oil Co.'s No. 27 Cole, through open tubing, ½ hr. 25
Sinclair Prairie Oil Co.'s No. 2-A A. A. King, through open tubing, ¼ hr. ... 50
Sinclair Prairie Oil Co.'s No. 22-A A. A. King, through 1¼-in. tubing, 10 min. 35
Sinclair Prairie Oil Co.'s No. 24-A A. A. King, through open tubing, ¼ hr. ... 45
Sinclair Prairie Oil Co.'s No. 6-B A. A. King, through 1½-in. tubing ¼ hr. .. 45
Sinclair Prairie Oil Co.'s No. 24 A. A. King, through open tubing, ¼ hr. ... 45
Sinclair Prairie Oil Co.'s No. 6-B A. A. King, through 1½-in. tubing choke, ¼ hr. 45
Sinclair Prairie Oil Co.'s No. 1-B A. A. King, through open tubing, ¼ hr. ... 45
Sinclair Prairie Oil Co.'s No. 5-B A. A. King, through open tubing, ¼ hr. ... 30
Sinclair Prairie Oil Co.'s No. 7 Lockhart, through open tubing, 10 min. 25
E. L. Smith Oil Co.'s No. 2 Register, through ⅝-in. tubing choke, ½ hr. .. 50
Standard Oil Co. of Kansas' No. 2 J. A. Knowles, through open tubing, ½ hr. 25
Sun Oil Co.'s No. 5 Cole, through tapered tubing 49
The Texas Company's No. 6 W. Davis, through 2-in. open tubing 106
Tidal Oil Co.'s No. 9 Barton, through open tubing and casing 300
The Texas Company's No. 7 Cole, through open tubing 106
Weaver-Crim's No. 7 Ben Laird, through ⅝-in. tubing choke 73
Winston Oil Co.'s No. 6 Paul Jones, through 1-in. tubing choke, ½ hr. ... 36

Wells completed 358
Initial production 22,504

MORRIS COUNTY

Crosbie and Robinson's No. 1 Gabriel. abd

NACOGDOCHES COUNTY

Vitex Combined Oil Co.'s No. 1 M. T. Hayter ..... abd

POLK COUNTY

Engleton Oil Co.'s No. 1 Saner-Ragley Lbr. Co. ..... abd

RUSK COUNTY

Bay Oil Corp.'s No. 4 W. P. Moore, through ⅝-in. tubing choke 77
East Texas Ref. Co.'s No. 2 C. Webb, through 2-in. tubing 75
East Texas Ref. Co.'s No. 5 D. Wills, through ⅝-in. tubing, ½ hr. 59
Friedman-Swindler's No. 2 Mrs. C. Holland, through pinched tubing, per day 59
Gulf Prod. Co.'s No. 13-C C. Christian, through ⅝-in. tubing 92
Humble Oil & Ref. Co.'s No. 53 Crim, through ⅝-in. tubing choke, ½ hr.. 45
Humble Oil & Ref. Co.'s No. 54 Crim, through ⅝-in. tubing, ½ hr. 55
Louisiana Oil & Ref. Co.'s No. 6 Jernigan, through 1-in. tubing choke, ½ hr. 62
Shasta Oil Co.'s No. 2 H. Alexandria, through 1-in. tubing choke on 2-in. tubing, ¼ hr. 25
Solar Exploration Co.'s No. 1 J. H. Leach, through tapered tubing 12
Anderson et al's No. 1 E. B. Alford, pumping 15
Bussa et al's No. 3 W. P. Britt, through open tubing, ½ hr. 40
Cullen Oil Co.'s No. 2 A. Thrash, through open tubing, ½ hr. 45
Demonstrand Oil Corp.'s No. 2 Pinkston, through open tubing 150
Devonian Oil Co.'s No. 6 Alford, through ⅝-in. tubing choke 85
R. W. Fair, through open 2-in. tubing. 50
Federated Oil Co.'s No. 4 Mayfield-Alford, pumping 61
Great Plains Oil Co.'s No. 4 Samp Stone, through open tubing, 22 min. 59
Gulf Prod. Co.'s No. 4 Thrash, through ⅝-in. tubing 60
Hugh Edwards Hale's No. 2 Marshall Clay, through open 2-in. tubing 40
H. Houghton's No. 1 Wylie, through 2-in. tubing 40
Humble Oil & Ref. Co.'s No. 6 J. H. Arnold, through ⅝-in. tubing choke, ½ hr. 42
Humble Oil & Ref. Co.'s No. 5 Odell Blackwell, through ⅝-in. tubing choke, ½ hr. 32
Humble Oil & Ref. Co.'s No. 5-A H. A. Piercy, through ⅝-in. tubing choke, ½ hr. 32
Humble Oil & Ref. Co.'s No. 9 J. W. Turner, through ⅝-in. tubing choke, ½ hr. 32
Humble Oil & Ref. Co.'s No. 3 C. W. Wilson, through ⅝-in. tubing choke.. 57
H. L. Hunt's No. 2 Sue Hale, through open 2-in. tubing 25
H. L. Hunt's No. 2-C Joe Lee, through 2-in. tubing 50
E. W. Jones' No. 3 W. P. Moore, through open tubing, ½ hr. 40
Kenwood Oil Co.'s No. 3 Deason, through 2½-in. tubing, ¼ hr. 30
Lion Oil & Ref. Co.'s No. 2 Wm. Jobe, through 1¼-in. tubing 60
John Mabee's No. 2 Samp Stone, through 2½-in. tubing 40
Mid-Kansas Oil & Gas Co.'s No. 5 L. C. Graham, through 2½-in. tubing 110
Mid-Kansas Oil & Gas Co.'s No. 1 Henry Clay Estate, through 2½-in. tubing 40
Mid-Kansas Oil & Gas Co.'s No. 7 J. F. Mason, through 2½-in. tubing 80
Mid-Kansas Oil & Gas Co.'s No. 3 J. M. Price, through 2½-in. tubing 90
Sinclair Prairie Oil Co.'s No. 2 Grissom, through open tubing, ¼ hr. 25
Sinclair Prairie Oil Co.'s No. 1 Allen Kersh, through open tubing, ¼ hr. .. 45
Sinclair Prairie Oil Co.'s No. 1 Peter Tippa, through open 2½-in. tubing, ½ hr. 47
Stanolind Oil & Gas Co.'s No. 3 Mason, through open tubing, 20 min. 30
Stanolind Oil & Gas Co.'s No. 3 R. J. Burton, through 1-in. tubing, ¼ hr. .. 25
Stanolind and Pure Oil Co.'s No. 6 R. A. Moores, through 1⅝-in. tubing choke, ½ hr. 30
Stanolind and Pure Oil Co.'s No. 3 W. H. Siler, through 2-in. tubing, 10 min. .. 25
Sun Oil Co.'s No. 2 Shuler and Shuler, through open tapered tubing 40
The Texas Company's No. 3 J. M. Price, through 2-in. tubing 66
Ward Oil Co.'s No. 6 Finney, through 2-in. tubing 58
Abercrombie and Harrison's No. 9 Cantrell, through 1½-in. tubing 210
Cordova Union Oil & Gas Co.'s No. 2 C. O. Christian, through pinched tubing, per day 50
Humble Oil & Ref. Co.'s No. 55 Crim, through ⅝-in. tubing, ½ hr. 55
Humble Oil & Ref. Co.'s No. 3-A J. E. Sexton, through ⅝-in. tubing choke, ½ hr. 43
Humble Oil & Ref. Co.'s No. 4-A J. E. Sexton, through 1b-in. tubing, ½ hr.. 28
E. M. Jones et al's No. 2 D. Wills, through open tubing, ½ hr. 100
Louisiana Oil & Ref. Co.'s No. 2 Mayfield, by heads 12
Magnolia Pet. Co.'s No. 3 W. M. Jernigan, through 1-in. tubing choke, 5 min. 64
Republic Prod. Co.'s No. 4 C. E. Christian, through open tubing, 10 min. .. 25
Weaver-Crim Corp.'s No. 1 Bean, through ⅝-in. open tubing 40
P. M. Biddison's No. 3 J. H. Wheelis, through open tubing, ½ hr. 90
British-American's No. 2 Ulsee Cooper, through open tubing, ¼ hr. 60
Chaplin and Bass' No. 1 Pinkston, through open 2-in. tubing 140
Deep Rock and Amerada Pet. Corp.'s No. 3 Stovall, through 2½-in. tubing. 160
Everts Drlg. Co.'s No. 2 Joe Lee, through open 2½-in. tubing 45
Golding and Murchinson's No. 3-A Pinkston, through open tubing 125
Gulf Prod. Co.'s No. 5-C Mayfield, through ⅝-in. tubing 75
Gulf Prod. Co.'s No. 5 B. B. Stone, through ⅝-in. tubing choke 77
Gulf Prod. Co.'s No. 10 G. C. Turner, through ⅝-in. tubing 62
Humble Oil & Ref. Co.'s No. 3 J. D. Florey, through ⅝-in. tubing, ½ hr.. 46
Humble Oil & Ref. Co.'s No. 5 W. B. Key, through ⅝-in. tubing, ½ hr. .. 50
Humble Oil & Ref. Co.'s No. 12-A S. A. Plowman, through ⅝-in. tubing choke, ½ hr. 46
Humble Oil & Ref. Co.'s No. 9-A R. E. L. Silvey, through ⅝-in. tubing, ½ hr. 26
Humble Oil & Ref. Co.'s No. 6-B R. E. L. Silvey, through ⅝-in. tubing choke, ½ hr. 38
Humble Oil & Ref. Co.'s No. 4 J. E. B. Sneed, tthrough ⅝-in. tubing choke, ½ hr. 38
Humble Oil & Ref. Co.'s No. 3-A Virginia Turner, through ⅝-in. tubing, ½ hr. 31
H. L. Hunt's No. 1-D Bradford, through tubing, pumping 8
H. L. Hunt's No. 4 V. E. Reid, through 2-in. tubing 37
H. L. Hunt's No. 5 Thrash, through 2-in. tubing, ¼ hr. 40
McDonald Bros.' No. 1 Cora Hannah, through open 2½-in. tubing, ½ hr. 45
M. B. Oil Co.'s No. 4 Griffin, through 2-in. tubing 60
Mid-Kansas Oil & Gas Co.'s No. 3 H. C. and G. W. Burton, through tubing .. 80
Mid-Kansas Oil & Gas Co.'s No. 11 M. M. Cross, through open tubing 80
Mid-Kansas Oil & Gas Co.'s No. 12 M. M. Cross, through open 2½-in. tu ing 30
Olsen Bros.'s No. 5 Powers, through 2½-tubing, ½ hr. 45
Sinclair Prairie Oil Co.'s No. 5 Ledbetter, through open 2½-in. tubing, ¼ hr 25
Sinclair Prairie Oil Co.'s No. 2 W. H. McCord ..... abd
Stanolind Oil & Gas Co.'s No. 7 R. A. Moores, through open 2½-in. tubing, 10 min. 25
Stanolind and Pure Oil Co.'s No. 6 W. H. Siler, through open tubing, ¼ hr. 32
Sun Oil Co.'s No. 1 Ellen Till, through tubing 14
Tex-Jersey Oil Co.'s No. 1 Cora Hannah, through open tubing 60
Ward Oil Co.'s No. 11 Thrash, through 2-in. tubing 85
Frank King's No. 1 Scroggins, through tubing, 10 min. 17
Gulf Prod. Co.'s No. 6-A C. E. Christian, through ⅝-in. tubing choke 75
Gulf Prod. Co.'s No. 8-A Christian, through ⅝-in. tubing choke 86
Gulf Prod. Co.'s No. 3 Sexton Estate, through ⅝-in. tubing choke 52
Humble Oil & Ref. Co.'s No. 57 Crim, through ⅝-in. tubing choke, ½ hr. . 45
McMahon et al's No. 3 S. S. Laird, through pinched tubing, per day 54
Patterson Drlg. Co.'s No. 1 W. N. Brightwell, through 2½-in. tubing, 40 min. 75
Stanolind Oil & Gas Co.'s No. 6 C. O. Christian, through 1½-in. tubing, ½ hr. 30
Tidal Oil Co.'s No. 3 Jernigan, through 2-in. open tubing, 5 min. 15
W. B. Tucker's No. 3 D. Wills, through pinched tu ing, per day 54
British-American's No. 4 Murphy, through 2½-in. tubing choke 154
Butler and Colhoun's No. 1 C. C. Lowe et al ..... abd
Cockerham et al's No. 2 Deason, through open tubing 50
Duncan and Holt's No. 2 R. A. Motley, through open tubing, ½ hr. 75
Golding and Murchinson's No. 1-B Strickland, swabbing, 5 hrs. 30
Gulf Prod. Co.'s No. 4-D Mayfield, through ⅝-in. tubing choke 70
Gulf Prod. Co.'s No. 3 J. W. Shaw, through ⅝-in. tubing choke 65
Humble Oil & Ref. Co.'s No. 3 Walter Shaw, through ⅝-in. tubing choke, ½ hr. 51
Humble Oil & Ref. Co.'s No. 8-A R. E. L. Silvey, through ⅝-in. tub.ng choke, ½ hr. 54
Humble Oil & Ref. Co.'s No. 1-D R. E. L. Silvey, through ⅝-in. tubing choke, ½ hr. 43
Humble Oil & Ref. Co.'s No. 4-A Virginia Turner, through ⅝-in. tubing choke, ½ hr. 51
Humble Oil & Ref. Co.'s No. 5 Wooster, through ⅝-in. tubing choke, ½ hr... 35
H. L. Hunt's No. 1-A Vinson, through open tubing 100
H. L. Hunt's No. 4-A Smith Wilson, through open tubing 150
H. L. Hunt's No. 4 A. A. Wooley, through open tu ing 75
Magnolia Pet. Co.'s No. 3 R. G. Mason, through 1-in. tubing choke, 6 min. .. 52
Mid-Kansas Oil & Gas Co.'s No. 14 M. M. Cross, through open 2½-in. tubing on 2-in. lead, based on 15-min. gauge. 172
Mid-Kansas Oil & Gas Co.'s No. 3 W. T. Grissom, through 2½-in. tubing choke on 2-in. lead 80
Mid-Kansas Oil & Gas Co.'s No. 8 Mason, through 2½-in. tubing 96
Mid-Kansas Oil & Gas Co.'s No. 6 S. H. Moores, through open 2½-in. tubing choke 60
Mid-Kansas Oil & Gas Co.'s No. 2 M. A. Price, through 2½-in. tubing choke. 80
Petroleum Marketing Corp.'s No. 2 Arnold, through open tubing 68
Sinclair Prairie Oil Co.'s No. 3 Bradford, through open tubing 53
Sinclair Prairie Oil Co.'s No. 2 Allen Kersh, through open tubing, ¼ hr. .. 35
Sinclair Prairie Oil Co.'s No. 23 Kinney, through open tubing, ¼ hr. 40
Sinclair Prairie Oil Co.'s No. 28 Kinney, through open tubing, ¼ hr. 35
Sinclair Prairie Oil Co.'s No. 29 Kinney, through open tubing, ¼ hr. 54
Sinclair Prairie Oil Co.'s No. 6 Ledbetter, through open tubing, ¼ hr. 32
Sinclair Prairie Oil Co.'s No. 8 Ledbetter, through open tubing 35
Sinclair Prairie Oil Co.'s No. 3 W. H. McCord, through open tubing 87
Stanolind Oil and Pure Oil Co.'s No. 4 R. J. Burton, through 1¼-in. tubing choke, ¼ hr. 40
The Texas Company's No. 6 First State Bank, through open tubing, ½ hr. 50
The Texas Company's No. 6 Pinkston, through open 2-in. tu ing 100
Tidal Oil Co.'s No. 5 M. Pool, through open tubing, ½ hr. 25
Tulsa Oil Co.'s No. 2 M. L. Thompson, through open tubing 125
Gulf Prod. Co.'s No. 14-C C. E. Christian, through tubing 90
Houston Oil Co.'s No. 4 S. S. Laird, through open tubing 105
Houston Prod. Co.'s No. 2 W. J. Brightwell, through open tubing 100
Humble Oil & Ref. Co.'s No. 6-B H. Sexton, through ⅝-in. tubing choke, ½ hr. 26
Louisiana Oil & Ref. Co.'s No. 5 Jernigan, through 1-in. tubing choke, ½ hr. 68
Magnolia Pet. Co.'s No. 4 W. M. Jernigan, through 1-in. tubing choke, 5 min. 75
Magnolia Pet. Co.'s No. 6 C. E. Still, through 1-in. tubing choke, 5 min. .. 85
Atlantic Oil & Prod. Co.'s No. 11 Brightwell, through open tubing, ½ hr. ... 90
Republic Prod. Co.'s No. 3 T. E. Haynes, through 1½-in. tubing choke, 10 min. 27
Rhodes Drlg. Co.'s No. 2 S. Brox, through open tubing 40
Tidal Oil Co.'s No. 5 Jack Bean, through open tubing 65
Solar Exploration Co.'s No. 1 R. M. Leath ..... abd
Bay Oil Corp.'s No. 4 W. O. Alford, through ⅝-in. tubing choke, 20 min.. 20
Blackwell Oil & Gas Co.'s No. 7 Samp Stone, through open tubing, ½ hr. ... 50
Conservative Oil Co.'s No. 3 Lizzie Harmon, through open 2½-in. tubing, ½ hr. 65
Everts Drlg. Co.'s No. 3 Joe Lee, through open tubing, ½ hr. 65
R. W. Fair et al's No. 1 J. R. Alford, through open 2-in. tubing 30
Gant-Gerwin and Wegener's No. 1 L. A. Till, pumping 71
Golding and Murchinson's No. 4-A L. J. Pinkston, through open tubing 100
Gulf Prod. Co.'s No. 3-A A. H. Rayford, through ⅝-in. tubing 55
Humble Oil & Ref. Co.'s No. 2 B. J. Bagwell, through ⅝-in. tubing choke, ½ hr. 51
Humble Oil & Ref. Co.'s No. 4 J. D. Florey, through ⅝-in. tubing choke, ½ hr. 51
Humble Oil & Ref. Co.'s No. 4-A H. A. Piercy, through ⅝-in. tubing choke, ½ hr. 49
Humble Oil & Ref. Co.'s No. 16 W. L. Price, through ⅝-in. tubing choke, ½ hr. 32
Humble Oil & Ref. Co.'s No. 17 W. L. Price, through ⅝-in. tubing choke, ½ hr. 50
Humble Oil & Ref. Co.'s No. 19 W. L. Price, through ⅝-in. tubing choke, ½ hr. 49
Humble Oil & Ref. Co.'s No. 2-B Haywood White, through ⅝-in. tubing choke, ½ hr. 41
Mallerne and Bullock's No. 2 E. B. Alford, through open 2½-in. tubing . 60
Mid-Kansas Oil & Gas Co.'s No. 13 M. M. Cross, through 2½-in. tu ing 20
Mid-Kansas Oil & Gas Co.'s No. 6 Cora L. Graham, through open tubing ... 85
Mid-Kansas Oil & Gas Co.'s No. 3 H. L. Griffin, through 2½-in. tubing choke, on 2-in. lead 35
Rogers et al's No. 1 Daisy Bradford, through open tubing 25
Jay Simmon's No. 1 D. C. Joyner, through ⅝-in. tubing choke 70
Sinclair Prairie Oil Co.'s No. 3 Grissom, through 2½-in. open tubing, ¼ hr. 30
Sinclair Prairie Oil Co.'s No. 4 Grissom, through open 2½-in. tubing, ¼ hr.. 27
Sinclair Prairie Oil Co.'s No. 2-A McCord, through open tubing, ¼ hr.. 25
Sinclair Prairie Oil Co.'s No. 30 Ida L. Kinney, through open tubing, ¼ hr.. 40
Sinclair Prairie Oil Co.'s No. 2 Peter Tippa, through open tubing, ½ hr. ... 25
Smith and Torrans' No. 4 Torrans, through ⅝-in. tubing choke 92
Pitman Oil Corp.'s No. 4 Cox, through 1-in. tubing choke 27
Sonbar Oil Co.'s No. 5 Finney, through 1½-in. tubing choke 90
Stanolind and Pure Oil Co.'s No. 8 R. A. Moores, through open tubing, 10 min. 27
Stanolind and Pure Oil Co.'s No. 5 R. A. Moores, through 1½-in. tubing choke, 10 min. 30
Stanolind and Pure Oil Co.'s No. 7 W. H. Siler, through ⅝-in. tubing choke, ¼ hr. 25
Stanolind and Pure Oil Co.'s No. 9 W. H. Siler, through 1½-in. tubing choke, ¼ hr. 30
Sun Oil Co.'s No. 4-B Schuler Joint, through open 2½-in. tubing 66
Tidal Oil Co.'s No. 2 Otis Whittington, through 2-in. tubing choke 45
Turman Oil Co.'s No. 6 R. Dark, through 2½-in. tubing 115
Ward Oil Co.'s No. 12 Thrash, through open 2-in. tubing 30
Clint Wood Drlg. Co.'s No. 2 Irvin, through open tubing, ½ hr. 35
Byrd-Frost, Inc.'s No. 1 R. E. Buckner abd

Wells completed 184
Initial production 10,262
Abandoned 4

SMITH COUNTY

Iowa Payne Oil Co.'s No. 2 J. B. Wilson, through 2½-in. tubing, ½ hr. .. 60
Mid-Kansas Oil & Gas Co.'s No. 8 M. L. Thompson, through 2½-in. tubing ... 118
Sinclair Prairie Oil Co.'s No. 2 E. E. Moore, through open tubing, 45 min... 59
Sinclair Prairie Oil Co.'s No. 4 Patterson, through open tubing, ¼ hr. 22
Sinclair Prairie Oil Co.'s No. 6 Amanda Wiley, through open tubing, ¼ hr.. 45
Sinclair Prairie Oil Co.'s No. 3 Bunch Wilson, through open tubing, ½ hr... 30
Sun Oil Co.'s No. 3 J. J. Denton, through tapered tubing 36
Summit Drlg. Co.'s No. 6 Mayfield, through open tubing 40
The Texas Company's No. 5-A Jarvis, through 2-in. tubing 90
Arcadia Ref. Co.'s No. 3-A J. R. Green, through open tubing, ½ hr. 45
Johnson and Owens' No. 3 Jackson, through open tubing 125
Pitzer and West's No. 1 L. S. Sartin, through tubing, 20 min. 45
Session et al's No. 2 Sebe Stone, through ⅝-in. tubing, 20 min. 15
Sinclair Prairie Oil Co.'s No. 12-C Jarvis, through open tubing, ¼ hr. 35
Sinclair Prairie Oil Co.'s No. 11-A Mayfield, through open tubing, ½ hr. .. 45
Sinclair Prairie Oil Co.'s No. 13-A Mayfield, through open tubing, ½ hr. .. 45
Sinclair Prairie Oil Co.'s No. 18-A Mayfield, through open tubing, ¼ hr. ... 45
Sinclair Prairie Oil Co.'s No. 19-A Mayfield, through open tubing, 20 min. .. 45
Sinclair Prairie Oil Co.'s No. 3 E. E. Moore, through open tubing, ¼ hr. .. 45
Sinclair Prairie Oil Co.'s No. 8 R. G. Wright ..... abd
Smith-Guerin and King's No. 1 S. S. Cooke, through open tubing 300
Sun Oil Co.'s No. 1-B J. J. Denton, through tapered tubing 44
Sun Oil Co.'s No. 4-A A. V. Ritch, through 2-in. tubing choke 48
Deaner and Reynolds' No. 2 Wilson, through open tubing, ½ hr. 75
H. L. Hunt's No. 4-B Fair, through 2-in. tubing 175
Manahan Drlg. Co.'s No. 1 S. S. Cooke, through ⅝-in. tubing choke 45
Sinclair Prairie Oil Co.'s No. 15-A Jarvis, through open tubing, ½ hr. 35
Sinclair Prairie Oil Co.'s No. 13-C Jarvis, through open tubing, ¼ hr. 40
Sinclair Prairie Oil Co.'s No. 5 Patterson, through open 2-in. tubing 25
Sinclair Prairie Oil Co.'s No. 7 Amanda Wiley, through open tubing, ¼ hr. ... 45
Smith County Oil & Gas Co.'s No. 1 S. S. Cooke, through 1½-in. tubing choke, 20 min. 30
Summitt Drlg. Co.'s No. 6 Mayfield, through open 2-in. tubing, ¼ hr. 45
Sun Oil Co.'s No. 3-B A. V. Ritch, through open tubing 38
Gulf Prod. Co.'s No. 4 Jack Wiley, through ⅝-in. tubing choke 75
Gulf Prod. Co.'s No. 6 Jack Wiley, through ⅝-in. tubing choke 85
R. J. McMurray's No. 1 Frank Cole, through open tubing 150
Sinclair Prairie Oil Co.'s No. 2-A Mayfield, through tubing, swabbing 8 hrs. 54
Sinclair Prairie Oil Co.'s No. 8-A R. G. Wright, through open tubing, ½ hr... 45
Sun Oil Co.'s No. 2-A H. A. Pace, through open tubing 43
Tulsa Oil Co.'s No. 4 M. L. Thompson, through 2½-in. tubing 110

Wells completed 40
Initial production 2497
Abandoned 1

UPSHUR COUNTY

Big Indian Oil Co.'s No. 2 W. R. Nicholson, through open tubing 100
East Texas Ref. Co.'s No. 3 D. Rodden, through 2½-in. tubing 105
Humble Oil & Ref. Co.'s No. 17 J. K. Edwards, through ¾-in. tubing choke 45
Humble Oil & Ref. Co.'s No. 2 Maddox, through ¾-in. tubing choke 81
Humble Oil & Ref. Co.'s No. 2 A. L. Shelton, through ¾-in. tubing choke, ¼ hr. 11
Humble Oil & Ref. Co.'s No. 3 A. J. Watkins, through ¾-in. tubing choke 70
Manson Oil Co.'s No. 4 J. B. Webb, through 2½-in. tubing choke 160
Mudge Oil Co.'s No. 7-A T. W. Free, through open tubing 100
Perrin and Fell's No. 3 C. C. Landers, through 2½-in. tubing 60
Rancho Oil Co.'s No. 7 Edwards, through 2½-in. tubing 85
Texina Oil Co.'s No. 2 J. W. Free, through 1-in. tubing choke 120
J. A. Woods' No. 2 J. H. Sheppard, through 2½-in. tubing, ¼ hr. 50
Cal-Pet. Corp.'s No. 6 Walker, through 2½-in. tubing choke 162
Danciger Oil & Ref. Co.'s No. 3 Stincomb, through 1-in. tubing 60
Humble Oil & Ref. Co.'s No. 3-B Eva O'Byrne, through ¾-in. tubing 79
Magnolia Pet. Co.'s No. 5 Blackwell, through open 2-in. tubing 120
Shano Oil Co.'s No. 4 Doby Rodden, through ¾-in. tubing choke 100
Sun Oil Co.'s No. 3 T. E. Ramey, through tapered tubing 45
The Texas Company's No. 2 H. L. Phillips, through 2-in. open tubing 110
Cal-Pet. Corp.'s No. 7 Walker, through open tubing 102
Danciger Oil & Ref. Co.'s No. 4 T. B. Stinchcomb, through open tubing, 10 min. 30
Cranfill & Reynolds and Russ' No. 1 R. Williams, through ¾-in. tubing choke, ¼ hr. 26
Falvey et al's No. 2 Betty Doby, through various chokes, per day ... 54
Humble Oil & Ref. Co.'s No. 10 W. W. Holland, through ¾-in. tubing choke, ¼ hr. 20
Humble Oil & Ref. Co.'s No. 7 G. W. Johnson, through ¾-in. tubing choke, ¼ hr. 22
Humble Oil & Ref. Co.'s No. 4-B J. T. Miller, through ¾-in. tubing choke .. 22
Humble Oil & Ref. Co.'s No. 8 I. D. Smith, through ¾-in. tubing choke, ¼ hr. 12
Humble Oil & Ref. Co.'s No. 3 J. M. Smith, through ¾-in. tubing choke .. 51
Island Oil Co.'s No. 2 Bonner Estate, through various chokes, per day 54
Magnolia Pet. Co.'s No. 1 L. Braves, through open tubing 120
Mudge Oil Co.'s No. 1 A. L. Shelton, through open tubing 75
Rancho Oil Co.'s No. 8 J. K. Edwards, through open tubing 80
Shell Pet. Corp.'s No. 3 Brawley, through tapered tubing 30
Lewis Sikes' No. 2 H. W. Moyers, through ¾-in. tubing choke 54
Simms and Buttram's No. 6 W. R. Nicholson, through 2-in. tubing choke ... 110
Sun Oil Co.'s No. 2 V. L. Loden, through tapered tubing 51
J. A. Woods et al's No. 4 A. J. Sanders, through various chokes 54
Alma Pet. Co.'s No. 2 G. Watson, through 1-in. tubing choke, ¼ hr. 45
Clark and Cowden's No. 2-A J. W. Free, through 1-in. tubing choke 85
Conservative Oil Co.'s No. 1 E. O'Byrne, through 1-in. tubing choke 100
East Texas Ref. Co.'s No. 4 D. Rodden, through 2-in. open tubing 135
Faith Oil Co.'s No. 1 E. H. Brawley, through 1½-in. tubing 67
Humble Oil & Ref. Co.'s No. 3-B J. T. Miller, through ¾-in. tubing choke, ¼ hr. 20
Humble Oil & Ref. Co.'s No. 4 A. O. Phillips, through ¾-in. tubing choke. 73
Magnolia Pet. Co.'s No. 10 Free, through 2-in. open tubing 160
Simms and Buttram's No. 5 W. R. Nicholson, through 2-in. tubing 105
Sun Oil Co.'s No. 4 T. C. Ramey, through tapered tubing 30

Wells completed 47
Initial production 3450

VAN ZANDT COUNTY

Pure Oil Co.'s No. 5 W. F. Swain, through tubing, after being choked for proration 120
Pure Oil Co.'s No. 2 B. F. Smith, through tubing, after being choked for proration 120
Pure Oil Co.'s No. 2 V. T. Davis ... abd
Pure Oil Co.'s No. 3 B. W. Russell ... 34

Wells completed 4
Initial production 274
Abandoned 1

East Texas Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Bowie	0	0	0	0	4	4	4
Cass	0	0	0	0	4	4	4
Harrison	0	0	0	0	2	2	4
Marion	1	0	1	0	0	3	3
Panola	0	0	0	0	1	3	4
Shelby	0	0	0	0	1	11	12
Total June	1	0	1	0	4	27	31
Total May	6	0	6	0	3	28	31
Difference	5	0	5	0	1	1	0

WELLS COMPLETED
MARION COUNTY

Chas. Lockhart Sur., Hussley, M. M. Howard 1 ..... junked

Kansas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Chase	1	100	0	0
Cowley	5	995	0	0
Greenwood	11	644	7	0
Kingman	1	165	0	0
McPherson	8	5,220	3	0
Reno	5	880	1	0
Sedgwick	3	590	2	0
Ellsworth	4	2,934	1	0
Woodson	1	100	0	0
Harvey	2	216	1	0
Chautauqua	1	0	0	1
Rush	1	0	0	1
Rice	1	1,104	0	0
Total June	44	12,948	15	2
Total May	35	16,643	18	0
Difference	9	3,695	3	2

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Greenwood	1	8	9
Butler	1	1	2
Sedgwick	2	14	16
Cowley	9	17	26
McPherson	23	36	59
Harvey	1	2	3
Sumner	1	1	2
Rice	2	6	8
Ellsworth	4	10	14
Russell	2	3	5
Barton	1	4	5
Rush	1	1	2
Edwards	0	1	1
Finney	0	1	1
Graham	1	0	1
Harper	0	1	1
Kingman	0	2	2
Phillips	0	1	1
Pratt	1	0	1
Rawlins	1	0	1
Reno	3	5	8
Saline	0	1	1
Sheridan	0	1	1
Stafford	0	1	1
Total June	54	117	171
Total May	56	143	199
Difference	2	26	28

WELLS COMPLETED
CHASE COUNTY

36-22-9 Smith et al 5 100

Wells Completed 1
Production 100

COWLEY COUNTY

22-32-4 Roth & Farout 1 100
22-32-4 Deal Oil & Gas Co. 1 470
22-32-4 Roth & Farout 2 350
30-31-6 Lewis Prod. Co. 2 50
27-32-4 McNabb et al 3 25

Wells completed 5
Production 995

GREENWOOD COUNTY

15-23-11 York State Oil Co. 1 ..... dry
28-23-11 Harwood Oil Co. 4 ..... dry
33-23-11 Harwood Oil Co. 3 204
7-24-12 Matthews & Rex 1 100
28-23-11 Gore & Phillips 4 340
33-23-11 Ward McGinnis 3 ..... dry
33-23-11 Ward McGinnis 4 ..... dry
29-22-11 Standard of Kansas 1 ..... dry
35-24-11 York State Oil Co. 1 ..... dry
28-23-11 Gore & Phillips 5 ..... dry
33-22-11 York State Oil Co. 12 100

Wells completed 11
Production 644
Dry 7

KINGMAN COUNTY

19-27-10w Skelly Oil Co. 1 165

Wells completed 1
Production 165

McPHERSON COUNTY

24-19-2w Shell Pet. Corp. 2 1928
24-19-2w Shell Pet. Corp. 2 1798
35-19-3w Shell Pet. Corp. 1 251
20-19-1w Darby Pet. Corp. 1 1234
21-19-1w Reed et al 1 ..... dry
25-19-1w Detrick et al 1 ..... dry
32-18-2w The Texas Co. 1 ..... dry
7-20-1w Mohawk 1 9

Wells completed 8
Production 5220
Dry 3

RENO COUNTY

24-23-4w Olson Drlg. Co. et al 1 180
35-23-4w Olson Drlg. Co. et al 1 ..... gas
33-22-7w Jarvis & Wright 1 ..... dry
25-23-4w Olson Drlg. Co. et al 1 250
25-23-4w Olson Drlg. Co. 1 450

Wells completed 5
Production 880
Dry 1

SEDGWICK COUNTY

4-28-1 Scroggins et al 1 ..... dry
8-28-2 Standard of Kansas 1 ..... dry
15-26-2 Shell Pet. Corp. 4 590

Wells completed 3
Production 590
Dry 2

HARVEY COUNTY

19-23-3w Olson Drlg Co. et al 1 216
23-3w Joe Liggett 1 ..... dry

Wells completed 2
Production 216
Dry 1

CHAUTAUQUA COUNTY

36-24-9 Anderson et al 1 ..... gas

Wells completed 1
Gas 1
Gas production 500,000

RUSH COUNTY

16-18-16w Flynn et al ..... gas

Wells completed 1
Gas 1
Gas production 45,000,000

ELLSWORTH COUNTY

12-17-10w Smith and The Texas Co. 1 .. 1734
1-17-10w Alyward et al 3 1000
22-16-10w Beardmoore 1 ..... dry
22-16-10w Gypsy Oil Co. 2 200

Wells completed 4
Production 2934
Dry 1

WOODSON COUNTY

14-25-13 Cress & Fields 1 100

Wells completed 1
Production 100

RICE COUNTY

18-20-9w Empire Oil & Ref. Co. 1 1104

Wells completed 1
Production 1104

Texas Panhandle Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Carson	1	170	0	0
Childress	1	0	1	0
Gray	16	6,091	1	1
Moore	1	0	0	1
Potter	1	0	0	1
Total June	20	6,261	2	2
Total May	9	915	1	2
Difference	11	5,346	1	1

Summary of Rigs and Wells Drilling

	Rigs	S.D.	Drlg.	Ttl.
Briscoe	0	0	1	1
Carson	2	0	5	7
Collingsworth	1	1	0	2
Gray	4	7	12	23
Hutchinson	3	4	3	10
Oldham	0	2	0	2
Moore	3	2	0	5
Roberts	0	2	1	3
Wheeler	0	0	1	1
Miscellaneous counties	1	1	1	3
Total June	14	19	24	57
Total May	12	17	36	65
Difference	2	2	12	8

WELLS COMPLETED
CARSON COUNTY

Skelly Oil Co., No. 17 West Schaffer .. 170

CHILDRESS COUNTY

C. L. Sloan et al, No. 1 B. P. Smith ... abd

GRAY COUNTY

A. J. Brown et al, No. 1 Duncan ..... abd
Continental Oil Co., No. 1-A Wright .. gas
Graham Cree & Hoover, No. 1 Barrett. 225
Gulf Prod. Co., No. 3 Faulkner 277
Humble Oil & Ref. Co., No. 1 Jackson. 225
Operators Roy. & Prod. Co., No. 1 Ferguson 22
Phillips Pet. Co., No. 6 Wood-Wright .. 375
Shamrock Oil & Gas Co., No. 3 Big Gray Saunders 94
Skelly Oil Co., No. 9 East Schaffer ... 265
Skelly Oil Co., No. 8 East Schaffer ... 265
The Texas Company, No. 8 Williams.. 122
The Texas Company, No. 9 Williams 1210
The Texas Company, No. 4 M. B. Davis 962
The Texas Company, No. 14 Bowers... 250
The Texas Company, No. 7 Wright 935
The Texas Company, No. 4 Davis 865

Completions 16
Production 6091
Gas wells 1
Gas production 8,500,000
Dry holes 1

MOORE COUNTY

Sunset Oil Co., No. 1 Dore ..... gas

Gas production 14,000,000

POTTER COUNTY

Red River Gas Co., No. 7 Bivens .... gas

Gas production 34,500,000

West Texas Fields

Summary of Wells Completed

	Comp.	Prod.	Dry	Gas
Andrews	1	200	0	0
Crockett	1	0	0	1
Crane	1	210	0	0
Glasscock	2	589	1	0
Howard	3	480	0	0
Irion	1	4	0	0
Pecos	9	270	4	0
Reeves	2	0	2	0
Ward	2	20	1	0
Total June	22	1,773	8	1
Total May	23	2,640	6	0
Difference	1	867	2	1

Summary of Rigs and Wells Drilling

	Rigs	S.D.	Drlg.	Ttl.
Crane	0	0	1	1
Crockett	2	0	0	2
Ector	0	1	1	2
Fisher	1	0	6	7
Gaines	0	1	0	1
Glasscock	3	1	4	8
Howard	1	1	4	6
Irion	0	1	3	4
Jones	2	3	3	8
Loving	1	5	6	12
Mitchell	0	0	1	1
Pecos	2	1	4	7
Reagan	0	0	3	3
Scurry	0	0	3	3
Upton	0	0	0	0
Ward	5	8	12	25
Winkler	0	0	1	1
Miscellaneous counties	1	16	2	19
Total June	18	38	54	110
Total May	13	38	62	113
Difference	5	0	8	3

WELLS COMPLETED
ANDREWS COUNTY

Fuhrman Pet. Co., No. 1 Bonner ... 200

CROCKETT COUNTY

Stanolind Oil & Gas Co., No. 1 Massie gas

Gas production 18,000,000

CRANE COUNTY

Gulf Prod. Co., No. 98 McElroy 210

GLASSCOCK COUNTY

Humble Oil & Ref. Co., No. 2 Arrington 589
Penn et al, No. 1 Habenstrip ..... abd

Completions 2
Production 589
Dry holes 1

HOWARD COUNTY

Schermerhorn, No. 4 Kloh 68
F.H.E. Oil Co., No. 1 Denman 70
Wallace et al, No. 1 Bell 342

Completions 3
Production 480

IRION COUNTY

Texannatti Oil Co. et al., No. 1 Tankersley 4

PECOS COUNTY

Messenger et al, No. 2 Britz ..... abd
Culberson Bros., No. 8-B Monroe 50
Culberson Bros., No. 9-B Monroe 25
Dittman et al, No. 1 Sanford ..... abd
Corvette Oil Co., No. 10 Monroe 50
Cardinal Oil Co., No. 2 J. H. Tippett .. abd
Culberson Bros., No. 7-B Monroe 90
Black et al, No. 1 Pecos Valley ..... abd
Gulf Prod. Co., No. 34 Yates 55

Completions 9
Production 270
Dry holes 4

REEVES COUNTY

James-Milton, No. 1 Patterson ..... abd
White et al, No. 1 Hershenshon ..... abd

Completions 2
Dry holes 2

WARD COUNTY

Moran-Miller, No. 1 Booger 20
Rector Oil Co., No. 1 Smith ..... abd

Completions 2
Production 20
Dry holes 1

North Central Texas Fields

Summary of Wells Completed

	Comp.	Prod.	Dry	Gas
Archer	40	1,873	22	1
Baylor	1	212	0	0
Callahan	8	92	7	0
Eastland	1	120	0	0
Montague	1	125	0	0
Palo Pinto	2	0	2	0
Shackelford	7	146	1	1
Stephens	1	0	1	0
Taylor	1	0	1	0
Throckmorton	3	0	3	0
Wichita	8	20	7	0
Wilbarger	3	275	0	0
Young	51	1,265	34	0
Total June	127	4,128	78	2
Total May	123	3,734	52	10
Difference	4	394	26	8

Summary of Rigs and Wells Drilling

	Rigs	S.D.	Drlg.	Ttl.
Archer	11	6	17	34
Brown	3	2	8	13
Callahan	3	0	4	7
Coleman	4	4	6	14
Cooke	2	2	2	6
Clay	0	1	0	1
Eastland	2	2	2	6
Erath	0	2	0	2
Jack	2	0	4	6
Palo Pinto	1	3	7	11
Shackelford	4	3	6	13
Stephens	0	0	3	3
Throckmorton	2	1	1	4
Wichita	2	2	10	14
Wilbarger	1	1	5	7
Young	17	6	18	41
Miscellaneous counties	4	15	3	22
Total June	58	50	96	204
Total May	44	49	105	198
Difference	14	1	9	6

WELLS COMPLETED
ARCHER COUNTY

L. T. Burns, No. 4 Wilson 125
Fain & McGaha and Wotola Royalty Co., No. 1 Campbell 149
Fain & McGaha and Wotola Royalty Co., No. 1 Fain & McGaha 45
Fain & McGaha and Wotola Royalty Co., No. 2 Fain & McGaha 158
R. M. Hamilton, No. 1 G. R. Decker .. abd
W. H. Holt et al, No. 1 White ..... abd
United Prod. Co., No. 1 Wilson ..... abd
A. T. Wolf, No. 1 Mankins ..... abd
L. G. Bradstreet ..... abd
Burns & Long, No. 1 Busby et al ..... abd
Cable Oil Co., No. 1 Hassom ..... abd
Continental Oil Co., No. 4 Falls 59
Continental Oil Co., No. 5 Falls 80
E. W. Hunt, No. 2 Logan ..... abd
Nix & Alexander, No. 1 Wilson ..... abd
George L. Pace, No. 5 Green 55
Petroleum Prod. Co., No. 1 Abercrombie abd
Deep Oil Dev. Co., No. 1 Wilson 80
Fain & McGaha, No. 1 Fain 200
Fain & McGaha, No. 1 Jackson 78
Houston & Houston, No. 6 Browning .. abd
C. E. Jones, No. 2 J. C. Thomas 6
King Roy. Co. and Burns, No. 1 Wilson abd
C. E. McClutheon, No. 1 J. J. Perkins.. abd
A. E. Stoute, No. 1 Wilson ..... abd
Anderson & Daubert, No. 1 Abercrombie 208
M. M. Bradley, No. 1 Garrey ..... abd
L. T. Burns, No. 2 Logan ..... abd
Cable Oil Co., No. 2 Webb 100
Continental Oil Co., No. 3 Falls 153
King Roy. Co., No. 1 Abercrombie .... abd
Lamont Drlg. Co., No. 1 Webb 312
W. E. Mason, No. 15 Gree 35
Moran & Wotola, No. 1 Ikard ..... abd
Moran Drlg. Co., No. 5 Harmel 15
Nix & Alexander, No. 1 Wilson ..... abd

Perkins & Cullum, No. 1 Abercrombie .. 15
Petroleum Prod. Co., No. 1 Abercrombie abd
The Texas Company, No. 1 Young .... abd
Wolfe et al, No. 1 Davis ..... abd

Completions 40
Production 1873
Dry holes 22

BAYLOR COUNTY

Consolidated Oil Co., No. 1-A Portwood 112

CALLAHAN COUNTY

Beams et al, No. 4 Jackson ..... a'd
Woodley Pet. Co., No. 8 E. L. Finley.. abd
R. Guffey, No. 4 E. L. Finley ..... abd
E. P. Frazier, No. 1 Jackson 92
Guffey-Perry, No. 1 W. E. Kanard .... abd
Hoffman & Page, No. 1 O. E. Radford abd
Pruitt & Van-Dearmon, No. 1 Berry.. abd
L. R. Terry, No. 1 F. E. Clark ..... abd

Completions 8
Production 92
Dry holes 7

EASTLAND COUNTY

Texas Pacific Coal & Oil Co., No. 6 fee. 120

PALO PINTO COUNTY

Linderman Bros., No. 1 Johnston ..... abd
Sinclair Prairie Oil Co., No. 1 Breggs.. abd

Completions 2
Dry holes 2

SHACKELFORD COUNTY

Callahan & Gist, No. 1 Sedwick ..... abd
Clay Dome Oil Co., No. 2-A E. A. Everts gas
Gilman & McMurray, No. 3 Jeter 20
J. R. Hearley et al, No. 1-B Williams.. 2
A. E. Walker, No. 6 L. H. Hill 20
Jones et al, No. 2-A W. J. Dodson 78
E. J. White, No. 1 J. D. Smith 24

Completions 7
Production 146
Gas wells 1
Dry holes 1

STEPHENS COUNTY

A. E. Thompson et al, No. 1 Manning.. abd

TAYLOR COUNTY

Dunigan et al, No. 1 King ..... abd

MONTAGUE COUNTY

Bridwell Oil Co., No. 2 Tucker 125

THROCKMORTON COUNTY

Sunrest Oil Co., No. 1 Everett ..... abd
Toncan Oil Co., No. 1 Callahan ..... abd
Toncan Oil Co., No. 2 Callahan ..... abd

Completions 3
Dry holes 3

WICHITA COUNTY

W. D. Cline, No. 1 Parker ..... abd
H. B. Hill, No. 2 Overby ..... abd
F. C. Baldwin, No. 6 Dobie ..... abd
L. T. Burns, No. 9 Waggoner Bros. ... abd
C. W. Clark, No. 3 Munger 20
G. W. Cooper, No. 31 Waggoner Bros.. a'd
Petroleum Prod. Co. ..... abd
Schlaffke, Blair-Walton, No. 2 Honaker abd

Completions 8
Production 20
Dry holes 7

WILBARGER COUNTY

C. H. Clark et al, No. 1 Waggoner ... 192
The Texas Company, No. 399-A Waggoner 72
John O'Neals, No. 1 Castleberry 10

Completions 3
Production 275

YOUNG COUNTY

Alexander & Wallace, No. 1 A. J. Love abd
Cable Oil Co., No. 2 Williams 25
W. R. Cooper, No. 1 Wilson ..... abd
L. P. Gaffney, No. 1 Lowe ..... abd
N. D. Goldsmith, No. 2 Wilson 78
Hamilton & Lee, No. 1 Jeffery ..... abd
Iron Mountain Oil Co., No. 1 McBrayer abd
The Texas Company, No. 1 Kunke ..... abd
Underwood Drlg. Co., No. 1 Eichelberger abd
United Prod. Co., No. 1-A Dunagan ... 32
Iron Mountain Oil Co., No. 6 Tatum .. 75
Iron Mountain Oil Co., No. 7 Tatum .. 25
King Royalty Co., No. 39 Larimore ... 90
Kleiner & Riggs, No. 10 J. L. Larimore abd
Kleiner & Riggs, No. 12 Larimore .... abd
A. Z. Kouri, No. 1 McClatchey ..... abd
W. M. Maier, No. 1 McClatchey ..... abd
Producers Co., No. 2 Finch 20
Reed & Beavers, No. 1 Slayton ..... abd
Regal Oil Co., No. 1-A Rushing ..... abd
A. H. and S. P. Schmitt, No. 208 Belknap 2
Seitz-Comegys & Seitz, No. 2 Ellis 640
Spann & McClung, No. 1 Stewart ..... a'd
George W. Terrell et al, No. 6 Larimore 15
George W. Terrell et al, No. 7 Larimore abd
F. E. Webb, No. 1 Haygood ..... abd
C. C. Williams, No. 3 Keith ..... abd
C. C. Williams, No. 1 Shatto ..... abd
D. L. Wolf, No. 1 Cole ..... abd
Wooten & Reed and Iron Mountain Oil Co., No. 1 F. V. Henson ..... abd
Dyer et al, No. 1 Allen 235
W. S. Randell, No. 2 Kisinger 12
J. C. Cunningham, No. 1 Stewart ..... abd
Charles A. Daubert, No. 1 Boswell ... abd
C. H. Fisher, No. 1 Cox 84
Hamilton & Lee, No. 1 Bullock ..... abd
Iron Mountain Oil Co., No. 8 Tatum ... 25
Kleiner & Riggs, No. 13 Larimore ..... abd
A. J. Pepper, No. 1 Finch ..... abd
C. Snoddy, No. 1 Baldwin ..... abd
E. F. Stoube, No. 1 Finch ..... abd
Sid Swink, No. 3 Keigh 10
George W. Terrell et al, No. 6 Larimore 15
The Texas Company, No. 1 Mullenox.. abd
United Producers Co., No. 2 Dunagan.. 20
Wooten & Reed et al, No. 1 Barrett ... abd
Wooten & Reed et al, No. 2 Henson ... abd
Petroleum Corp. of Texas, No. 1 Stephen abd
L. A. Long, No. 1 Williams 500
J. L. McMeens, No. 2 Hawkins ..... abd

Completions 51
Production 1265
Dry holes 34

Gulf Coast Fields

Summary of Field Operations

Texas

Field—	Comp.	Prod.	Abd.	Gas	Rigs	Drlg.	Ttl.
Barbers Hill ..	5	5,235	0	0	0	13	13
Brenham	0	0	0	0	0	1	1
Clay Creek ...	0	0	0	0	0	1	1
Esperson	1	300	0	0	0	1	1
Goose Creek ..	0	0	0	0	0	1	1
High Island ..	1	1,050	0	0	0	5	5
Hull	1	300	0	0	2	6	8
Humble	7	425	2	1	0	5	5
Liberty	1	0	1	0	0	0	0
Lost Lake	1	250	0	0	0	0	0
Manvel	1	0	1	0	1	0	1
Markham	3	640	2	0	0	2	2
Moss Bluff ...	1	0	1	0	0	2	2
Mykawa	1	200	0	0	0	0	0
Orange	1	40	0	0	0	2	2
Orchard	0	0	0	0	0	1	1
Piedce Junction	1	0	1	0	0	4	4
Port Neches ..	1	180	0	0	0	1	1
Rabbs Ridge ..	2	2,680	0	0	0	8	8
Raccoon Bend.	0	0	0	0	0	1	1
Refugio	4	530	1	0	0	5	5
Rockland	1	40	0	0	0	0	0
Saratoga	3	0	3	0	0	1	1
West Columbia	0	0	0	0	0	1	1
Miscellaneous .	14	2,400	11	1	0	44	47
Total June .	50	14,280	23	2	6	104	110
Total May ..	54	12,990	23	1	6	94	100
Difference ..	4	1,290	0	1	0	10	10

Louisiana

Black Bayou .	0	0	0	0	0	1	1
Choctaw	1	0	1	0	0	1	1
Edgerly	1	30	0	0	0	0	0
Hackberry, East	2	50	1	0	0	5	5
Hackberry, Old	1	0	1	0	1	2	3
Iowa	1	545	0	0	0	1	1
Jennings	0	0	0	0	0	1	1
Lake Barre ..	0	0	0	0	0	2	2
L. Washington.	1	100	0	0	0	0	0
Leesville	0	0	0	0	0	1	1
Lockport	0	0	0	0	0	1	1
Starks	1	15	0	0	0	0	0
Sulphur	0	0	0	0	0	3	3
Vinton	0	0	0	0	0	1	1
Miscellaneous .	8	895	7	0	0	4	4
Total June .	16	1,925	10	0	1	23	24
Total May ..	21	13,674	9	0	1	22	23
Difference ..	5	11,749	1	0	0	1	1

Gulf Coast Summary

Total June .	66	16,215	33	2	7	127	134
Total May ..	75	26,664	32	1	7	116	123
Difference ..	9	10,449	1	1	0	11	11

TEXAS

WELLS COMPLETED

BARBERS HILL—CHAMBERS COUNTY

Higgins, McAlbert Oil Co. 2-B 360
Wilburn, Sun Oil Co. 14 1000
Barbers, Texas Gulf Prod. Co. 7-A 100
Ilfrey, Texas Gulf Prod. Co. 3 2400
Kirby, Texas Gulf Prod. Co. 10-B 1375

Wells completed 5
Production 5235

ESPERSON—LIBERTY COUNTY

Esperson, Cranfill-Reynolds Co. 20 300

HIGH ISLAND—GALVESTON COUNTY

Broussard, Yount Lee Oil Co. 1 1050

HULL—LIBERTY COUNTY

Dolbear, Republic Prod. Co. 61 300

HUMBLE—HARRIS COUNTY

Burt, Cullen & West 4 ..... a'd
C.O.&G.-Texas, John Deering 1 135
Fee, Rio Bravo Oil Co. 1 80
River, Sun Oil Co. 55 ..... gas
River, Sun Oil Co. 56 160
Wheeler & Pickens, The Texas Company 25 ..... abd
Wheeler & Pickens, E. M. Wilson 9 ... 50

Wells completed 7
Production 425
Abandoned 2
Gas 1

LOST LAKE—CHAMBERS COUNTY

Mayes, Pure Oil Co. 15 250

MANVEL—BRAZORIA COUNTY

Belcher, The Texas Company 2 ..... abd

MARKHAM—MATAGORDA COUNTY

Elkins, Claude Hamill et al 2 ..... abd
Meyers, Ellis Hamill et al 2 640
Hudson, Southern Drlg. & Prod. Co. 1. abd

Wells completed 3
Production 640
Abandoned 2

MOSS BLUFF—LIBERTY COUNTY

Harrison, Texas Gulf Sulphur Co. 7 ... abd

MYKAWA—HARRIS COUNTY

Minnetex, Crown-Framer Oil Co. 2 200

ORANGE—ORANGE COUNTY

Tasco, Tillery Oil Co. 1 40

PIERCE JUNCTION—HARRIS COUNTY

Whitehead, Anderson & Plummer 7 ... abd

PORT NECHES—ORANGE COUNTY

Kuhn, The Texas Company 2 190

RABBS RIDGE—FORT BEND COUNTY

F. I. Booth, Gulf Prod. Co. and Humble Oil & Ref. Co. 1-A 1360
Lockwood, Humble Oil & Ref. Co. and Gulf Prod. Co. 2 1320

Wells completed 2
Production 2680

REFUGIO—REFUGIO COUNTY

O'Connor, Moody-Seagraves Prod. Co. 1. 15
Ryalls, Pearson Properties, Inc., 2 250
W. J. Fox, United Prod. Corp. 3 ..... gas
W. J. Fox, United Prod. Corp. 5 265

Wells completed 4
Production 530
Gas 1

SARATOGA—HARDIN COUNTY

Cotton, Rio Bravo Oil Co. 137-A ..... abd
Cotton, Rio Bravo Oil Co. 138-A ..... abd
Cotton, Rio Bravo Oil Co. 139-A ..... abd

Wells completed 3
Abandoned 3

ROCKLAND—JASPER COUNTY

Boykin, Rio Neches Oil Co. 2-A 40

LIBERTY—LIBERTY COUNTY

Pickett, The Texas Company 2 ..... abd

MISCELLANEOUS—TEXAS

Austin County—
John Fitzgibbons Sur., Schiecte, Taylor & Mitchell 1 ..... abd

Fort Bend County—
Barret & Harris Sur., Brown, O'Hara et al 1 ..... abd

Jackson County—
Edna—Drushell, Chicago Gulf Oil Corp. 4 ..... abd

Jefferson County—
Cheek—Todd, Jack Shults 1 ..... a'd

Liberty County—
Aug. B. Hardin Sur., Finley, DeVore Oil Co. 1 ..... abd

Montgomery County—
John Davis Sur., Freeman, Heep Oil Corp. 1 1200
Wm. H. Harrison Sur., Roberts, Heep Oil Corp. 1 ..... abd
Pinehurst—Flemming, Lowrie & Young 1 ..... abd
J. C. Pitts Sur., Sealey, Smith & Daniel 1 ..... abd
Theo. Slade Sur., So. Tex. Dev. Co., Strake Oil Corp. 2 1200

Orange County—
J. W. Hill Sur., Mansfield, Crews Oil Co. 1-A ..... abd

Polk County—
Freeman, Freeman et al 2 ..... abd
Houston Co. School Land, Sanger-Ragly Lbr. Co. 1 ..... abd

Victoria County—
J. Varian Sur., McFaddin, T. B. Slick Estate 2 ..... gas

Wells completed 14
Production 2400
Abandoned 11
Gas 1

LOUISIANA

CHOCTAW—IBERVILLE PARISH

Gay, Standard Oil Co. 2 ..... abd

EDGERLY—CALCASIEU PARISH

Hunter, Emerson & Moore 1-B 30

EAST HACKBERRY—CAMERON PARISH

Dorion, Calcasieu Oil Co. 3 ..... abd
Irwin, J. G. Sutton 1 ..... abd

OLD HACKBERRY—CAMERON PARISH

Vincent, R. E. Seiss 2 ..... abd

IOWA—JEFFERSON DAVIS PARISH

Fontenot, Shell Petroleum Corp. 1 845

LAKE WASHINGTON—PLAQUEMINES PARISH

Cockrell—Moran, Freeport Sulphur Co. 1 100

STARKS—CALCASIEU PARISH

Lutcher—Moore, Gulf Ref. Co. 30 15

MISCELLANEOUS—LOUISIANA

Iberia Parish—
Jeff. Island—Lake Peigneur, Jeff. Lake Oil Co. 33 ..... abd
Jeff. Island—Lake Peigneur, Jeff. Lake Oil Co. 34 ..... abd
Jeff. Island—Lake Peigneur, Jeff. Lake Oil Co. 35 ..... abd

La Fourche Parish—
Chacahoula—Stark, State Prod. Co. 1-E a'd

Terrebonne Parish—
Bay St. Elaine—Wurzlow, Freeport Sulphur Co. 2 ..... abd
Sec. 3-18s-16e. Minor, Louisiana Gas & Fuel Co. 2 ..... abd
Dog Lake—State, The Texas Company 5 abd

Vermillion Parish—
Gueydan—Alliance Trust Co., Pure Oil Co. 2 895

Wells completed 8
Production 895
Abandoned 7

North Louisiana Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Beauregard ...	0	0	0	0	0	1	1
Bienville	0	0	0	0	0	1	1
Bossier	1	0	1	0	0	0	0
Caddo	3	90	0	3	1	0	1
Caldwell	0	0	0	0	0	2	2
Catahoula	0	0	0	0	0	1	1
De Soto	2	0	1	1	3	4	7
Grant	0	0	0	0	1	1	2
Natchitoches .	0	0	0	0	1	6	7
Ouachita	0	0	0	0	1	2	3
Red River	0	0	0	0	2	1	3
Richland	0	0	0	0	0	1	1
Sabine	24	8,915	14	0	53	48	101
Tensas	0	0	0	0	0	1	1
Union	2	0	0	2	1	0	1
Vernon	0	0	0	0	0	1	1
Winn	0	0	0	0	1	0	1
Total June .	32	9,005	16	5	64	70	134
Total May ..	20	3,281	5	3	58	64	122
Difference ..	12	5,724	11	2	6	6	12

Gas production: Caddo, 2,000,000 feet; De Soto, 11,400,000 feet; Union, 9,000,000 feet; total, 22,400,000 feet.

WELLS COMPLETED

AVOYELLES PARISH

40-1n-7e Carruth, Stauffer & Eshleman 1 ..... abd

BOSSIER PARISH

12-19-11 Newell, M. Miller et al 1 ... dry

CADDO PARISH

5-16-15 Scott, Calatex O. & G. Co. 1. gas
9-18-16 Breard, Pyramid O. & G. Co. 2 gas
13-20-15 Yource-Glassell, Simplex Oil Co. 1 90

Gas production 2,000,000

DE SOTO PARISH

6-12-11 Nabors, J. W. Barton 1 ..... dry
16-12-16 Horn, A. R. Smith 1 ..... abd
19-12-14 Sutherlin, Standard Oil & Pelican Nat. Gas Co. 1 ..... gas

Gas production 11,400,000

SABINE PARISH

14- 7-11 Duggan, O. J. Baird 2 10
28-10-11 Armstrong, J. M. Bridges 1.. dry
2- 7-14 Costello, Broderick & Calvert 1 ..... dry
26- 8-13 LaRoux, W. M. Coates 1 ..... dry
1- 7-13 Nulton, W. M. Coates 1 ..... dry
35- 8-13 Stille, W. M. Coates 1 ..... dry
3- 7-13 S. S. Martinez, Coates Pet. Co. 2 3000
32- 7-11 Bray, Covington, Clark & Fullilove 1 ..... abd
1- 7-13 Nulton, Dengail O. & G. Co. 1-E 385
11- 7-11 Peters, Depression Oil Co. 1.. dry
2- 7-13 Ezernack, M. F. Friend 1 ... dry
1- 7-11 Newton, Lionel Hawkins 2 .. abd
12- 7-11 Petty, D. Holcomb 1 ..... dry
20- 7-11 Buvens, M. J. Kissick 1 ..... dry
14- 7-11 McNeely, W. F. Lacey 3 150
2- 7-11 McCormick, Zeke Lohman 1. dry
34- 8-13 Martinez, Lowery & Greene 1 dry
5- 7-10 DeLong, Mays et al ..... abd
3- 7-13 Nulton, Ben Merritt Trustee 1 750
14- 7-11 Cobb & Alford, E. F. Neely 1. 25
10- 7-11 La. Long Leaf Lbr. Co., Pelican Nat. Gas Co. 11 ..... dry
6- 7-10 Brown Lbr. Co., H. W. Perritt 1 ..... dry
14- 7-11 McNeely, P. C. Reid 1-A 20
8- 7-11 Lilley, C. T. Ruffian 1 75
3- 7-13 Sabine Lbr. Co., Sabine Prod. Co. 1 1500
12- 7-11 La. Long Leaf Lbr. Co., Service Drlg. Co. 1 ..... dry
7- 7-10 Byrd, C. H. Tuttle 2 3000

UNION PARISH

26-20-3e Steele, Interstate Nat. Gas Co. 2 ..... gas
26-20-3e Steele, Interstate Nat. Gas Co. 3 ..... gas

Gas production 9,000,000

Arkansas Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Ashley	1	0	1	0	0	0	0
Clay	0	0	0	0	0	1	1
Cleburne	1	0	1	0	1	0	1
Cleveland	0	0	0	0	1	0	1
Columbia	1	0	1	0	0	0	0
Dallas	0	0	0	0	0	1	1
Drew	0	0	0	0	0	1	1
Hot Springs ..	0	0	0	0	0	1	1
Lincoln	0	0	0	0	0	1	1
Little River ..	0	0	0	0	1	0	1
Logan	0	0	0	0	0	1	1
Miller	0	0	0	0	0	3	3
Ouachita	0	0	0	0	1	2	3
Pike	0	0	0	0	0	2	2
Prairie	0	0	0	0	0	1	1
Scott	0	0	0	0	0	1	1
Sevier	0	0	0	0	0	1	1
St. Francis ...	0	0	0	0	0	2	2
Union	3	0	3	0	3	5	8
Van Buren	0	0	0	0	0	1	1
Washington ...	0	0	0	0	0	2	2
Yell	1	0	1	0	0	0	0
Total June .	7	0	7	0	7	25	32
Total May ..	3	0	3	0	7	30	37
Difference ..	4	0	4	0	0	5	5

WELLS COMPLETED

ASHLEY COUNTY

31-15s-6w Crossett Lbr. Co., D. S. Brooks, Inc. 1 ..... dry

CLEBURNE COUNTY

33-11-9 Donighan, Craver & Walker 1 dry

COLUMBIA COUNTY

13-17-22 Fullenweider, Rhea & Kitchen 1 ..... dry

DALLAS COUNTY

20-10-13 Hilton, Zepp Oil & Gas Co. 1. abd

LAWRENCE COUNTY

31-17-1 Broadaway, Marguerite Dev. Co. 1 ..... abd

SCOTT COUNTY

36- 4-26 Reser, Heavener Oil & Gas Co. 1 ..... dry

UNION COUNTY

1-17-16 Pickering, Drillers Oil & Dev. Co. 1 ..... dry
19-17-12 Union Saw Mill Co., Pigeon Hill Oil Co. 1 ..... dry
16-19-15 Wingfield, Southern Prod. Co. 1 ..... dry

YELL COUNTY

36- 7-21 Falcon, Tegtmeir & Luckett 1 dry

Mississippi Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Clarke	0	0	0	0	0	1	1
Hinds	0	0	0	0	0	6	6
Jasper	1	0	1	0	0	0	0
Lamar	0	0	0	0	0	1	1
Lowndes	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	1	1
Newton	0	0	0	0	0	1	1
Noxubee	0	0	0	0	0	1	1
Rankin	4	0	1	2	1	3	4
Scott	0	0	0	0	0	1	1
Warren	1	0	1	0	0	0	0
Total June .	6	0	3	3	1	16	17
Total May ..	2	0	1	1	1	16	17
Difference ..	4	0	2	2	0	0	0

Gas production: Rankin, 94,800,000 feet.

WELLS COMPLETED

JASPER COUNTY

21- 2-10 Keys, Bay Springs Pet. Co. 1. dry

RANKIN COUNTY

1-5n-1e Fitzhugh, James Alexander, Trustee 2 ..... gas
14-5n-1e Hanna, Orr et al 1 ..... dry
11-5n-1e Bradley, Muse, Muse & Love 1 gas
1-5n-1e Fitzhugh, James Alexander, Trustee 1 ..... gas

Gas production 94,800,000

Alabama Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Clark	0	0	0	0	0	1	1
Lamar	0	0	0	0	0	1	1
Mobile	0	0	0	0	0	2	2
Washington	0	0	0	0	1	0	1
Total June	0	0	0	0	1	4	5
Total May	0	0	0	0	3	2	4
Difference	0	0	0	0	1	2	1

Southwest Texas Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Pettus	3	552	0	0	0	1	1
Cooksey	2	20	0	0	0	0	0
Dunlap	1	400	0	0	1	0	1
Sarnosa	3	1,324	1	0	2	0	2
Gov. Wells	2	310	0	0	2	5	7
Darst Creek	1	235	0	0	0	2	2
Los Olmos	5	30	3	0	0	14	14
Rio Grande	4	0	4	0	1	4	5
Saxet	2	460	0	0	0	3	3
Refugio	1	600	0	0	0	2	2
McFadden	1	0	0	1	1	3	4
West Cole	2	125	0	0	0	1	1
Mirando Valley	2	0	2	0	0	0	0
Escobas	10	1,320	3	0	1	6	7
Miscellaneous	33	2,900	29	2	15	99	114
Total June	73	8,277	42	3	23	140	163
Total May	61	7,780	36	2	31	119	150
Difference	11	497	6	1	8	21	13

WELLS COMPLETED

PETTUS POOL—BEE COUNTY

Ray, United Prod. Co. 42 128
Ray, United Prod. Co. 43 125
Ray, Slick & Seeligson 6 300

COOKSEY POOL—BEXAR COUNTY

Pollok, Chiquita Oil Co. 3 5
Pollok, Chiquita Oil Co. 4 15

DUNLAP POOL—CALDWELL COUNTY

Walker, Empire Gas & Fuel Co. 1 400

SARNOSA POOL—DUVAL COUNTY

Ruiz, Magnolia Pet. Co. 1 384
Cano, Sun Oil Co. 1 940
Ruiz, The Texas Co. 1 ..... abd

GOVERNMENT WELLS POOL—DUVAL COUNTY

Bishop Cottle Co., Duval Oil Corp. 10 ... 300
Bishop Cattle Co., Duval Oil Corp. 9 ... 10

DARST CREEK POOL—GUADALUPE COUNTY

Dan Denman, Humble Oil & Ref. Co. 4. 235

LOS OLMOS POOL—STARR COUNTY

Kelsey Bass, Allison & Roberts 1 ..... abd
Seabury, George & Taylor, Bennett Oil Co. 1 ..... abd
Kelsey Bass, Hooks & Weaver 6 15
Kelsey Bass, Los Olmos Oil & Gas Co. 13 15
Seabury, George & Taylor, R. H. Pursley 2 ..... abd

RIO GRANDE POOL—STARR COUNTY

Goodrich, Sioux Oil Co. 2 ..... abd
Seabury, R. E. Johnson 1 ..... abd
Chatfield, Edwin M. Jones 1 ..... abd
Perez, Gulf Coast Oil Co. 1 ..... abd

SAXET POOL—NUECES COUNTY

Hunter, Rutherford Drilling Co. 1 300
Hocker & Sevier, Tule Lake Oil Co. 1.. 160

REFUGIO POOL—REFUGIO COUNTY

Ryals, W. L. Pearson Properties 3 600

McFADDEN POOL—VICTORIA COUNTY

McFadden, T. B. Slick Estate 2 ..... gas

WEST COLE POOL—WEBB COUNTY

Benavides, Magnolia Pet. Co. 2 50
Benavides, French Oil Corp. A-4 75

MIRANDO VALLEY POOL—ZAPATA COUNTY

Killam, O. W. Killam 5 ..... abd
Hinnant, O. W. Killam 1 ..... abd

ESCOBAS POOL—ZAPATA COUNTY

Gutierrez, Allied Oil & Gas Co.-Allen & Morris 24 100
M. Garza estate, E. K. Bateman 1 ..... abd
G. T. Montemayor, McGinley Corp. 2 ... abd
G. T. Montemayor, S. R. C. Oil Co. D-10 275
Montemayor, S. R. C. Oil Co. D-11 175
Medina, O. W. Killam 3 100
Jose Bustamente, McGinley Corp. 1 ... abd
Gutierrez, Allied Gas Co. 25 110
Gutierrez, Allied Gas Co. 26 500
Measles, The Texas Co. 8 60

Wells completed 39
Production 5377
Gas production 50,000,000
Abandoned 13

MISCELLANEOUS

Bastrop County—

Owensy, I. L. Champion 1 ..... abd
D. J. Orgain, Lonnie Evans-Dan Aud 1 abd
R. L. Carter, E. R. Marts and W. J. Beaven 1 ..... abd

Bee County—

Kimball, J. L. Mauldin 1 ..... abd
Weiss, E. S. Price ..... abd

Caldwell County—

McCrory, C. J. Webster Oil & Gas Co. 1 abd
Dickerson, John Storey 1 ..... abd

Crockett County—

Massie, Stanolind Oil & Gas Co. 1 ..... gas

DeWitt County—

E. T. Clark, Pat Armstrong 1 ..... abd

Duval County—

John Dinn, Co-operative Drlg. Co. 5 ... abd
Bennett, J. S. Suttle et al 1 2800
Duval Ranch Co., Hynes & Nesuly 1 ... abd

Gonzales County—

Botts, Nassamer 2 ..... abd
Botts, Nassamer, Gordon & Waldrop 1.. abd

Gundalupe County—

R. Drummer, J. E. Clark 1 ..... abd
Zunker, Sal-Mar Oil Co. 1 100

Jim Hogg County—

J. Weil, Grayburg Oil Co. 1 ..... abd
Guerra Borah, Allen et al 1 ..... abd
W. W. Jones, Duval Oil Co. 1 ..... abd

Jim Wells County—

Seefeld, Carrol Brown 1 ..... abd

Lee County—

Hickey-Washington-Lee Oil Co. 1 ..... abd

Medina County—

Adams, Arnet & Fincke 1 ..... abd

Milam County—

Williams, Bridwell et al 1 ..... abd

Real County—

Haby, McGinley Corp. 1 ..... abd

Starr County—

Margo, Frank Dawson 1 ..... gas
Wells, Davenport et al 1 ..... abd
Guerra, Tarver & Nance 1 ..... abd
Rio Grande City, Brady Drlg. Co. 1 .... abd
Woods, O. W. Killam 1 ..... abd

Travis County—

Hatech, Ray & Henze 1 ..... abd

Webb County—

Billings, McGinley Corp. 1 ..... abd

Williamson County—

Streit, G. L. Rowsey 1 ..... abd

Zapata County—

G. G. Flores, McGinley Corp. 1 ..... abd

Wells completed 32
Production 2900
Gas production 18,395,000
Abandoned 29

Rocky Mountain Area

MONTANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Carbon	1	0	1	0	2	7	9
Cascade	0	0	0	0	0	3	3
Fergus	0	0	0	0	0	2	2
Glacier	0	0	0	0	3	4	7
Hill	0	0	0	0	0	3	3
Liberty	0	0	0	0	0	6	6	12
Pondera	0	0	0	0	0	3	3
Teton	0	0	0	0	0	4	4
Toole	1	10	0	0	4	11	15
Miscellaneous	0	0	0	0	3	19	22
Total June	2	10	1	0	18	61	79
Total May	3	1,350	1	0	17	50	67
Difference	1	1,340	0	0	1	11	12

WELLS COMPLETED

13-41-12 Walkin Pet. Co. 4 35
27-35-3w Levnick, Huso Bros. 4 10
15-7s-22 Kuchinski, Ohio Oil Co. 1 ... dry

Wells completed 2
Production 10
Dry and abandoned 1

NEW MEXICO

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Chaves	0	0	0	0	0	2	2
Curry	1	0	1	0	0	0	0
De Baca	0	0	0	0	0	2	2
Eddy	0	0	0	0	1	4	5
Lea	2	6,454	0	0	2	4	6
McKinley	0	0	0	0	1	5	6
Rio Arriba	0	0	0	0	0	3	3
San Juan	0	0	0	0	1	8	9
San Miguel	0	0	0	0	0	5	5
Miscellaneous	0	0	0	0	3	15	18
Total June	3	6,454	1	0	8	48	56
Total May	4	1,530	1	0	10	49	59
Difference	1	4,924	0	0	2	1	3

WELLS COMPLETED

10-19-28 State, Midwest Ref. Co. 29.. 886
18-18-28 Hardin, Amerada Pet. Corp. 1.5568
24-2n-31 Hart, G. W. Trout et al 1.. abd

Wells completed 3
Production 6454
Dry and abandoned 1

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Arapahoe	0	0	0	0	0	2	2
Boulder	0	0	0	0	0	4	4
Elbert	0	0	0	0	0	3	3
Fremont	3	0	3	0	0	4	4
La Plata	0	0	0	0	1	3	4
Larimer	0	0	0	0	1	12	13
Las Animas	0	0	0	0	1	2	3
Moffat	0	0	0	0	2	2	4
Montrose	1	0	1	0	0	1	1
Morgan	0	0	0	0	2	1	3
Rio Blanco	1	0	0	1	0	2	2
Routt	0	0	0	0	1	2	3
Weld	0	0	0	0	1	7	8
Miscellaneous	0	0	0	0	1	20	21
Total June	5	0	4	1	10	65	75
Total May	2	0	2	0	10	67	77
Difference	3	0	2	1	0	2	2

WELLS COMPLETED

9-2s-96 Maddock, Magnolia Pet. Co. 1 gas
27-50-10 Colo., Uncompahgre Oil & Gas 1 ..... abd
27-19-70 Gindro, P. W. Harr 1 ..... dry
21-18-70 Harding, Canon Heights Oil Co. 1 ..... dry
11-19-70 Dia Giacomo, P. W. Harr 1. dry

Wells completed 5
Gas 8,750,000
Dry and abandoned 4

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Washington Co. 1	35	0	0	0	3	3	
Miscellaneous	0	0	0	0	0	14	14
Total June	1	35	0	0	0	17	17
Total May	0	0	0	0	1	19	20
Difference	1	35	0	0	1	2	3

WYOMING

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Big Horn	0	0	0	0	2	4	6
Carbon	0	0	0	0	1	6	7
Converse	0	0	0	0	1	5	6
Fremont	0	0	0	0	2	3	5
Hot Springs	0	0	0	0	0	2	2
Natrona	0	0	0	0	2	9	11
Park	0	0	0	0	1	6	7
Sweetwater	0	0	0	0	2	5	7
Sublett	0	0	0	0	2	8	10
Uinta	0	0	0	0	0	6	6
Weston	1	300	0	0	5	13	18
Miscellaneous	0	0	0	0	0	9	9
Total June	1	300	0	0	18	76	94
Total May	2	203	0	0	16	62	78
Difference	1	97	0	0	2	14	16

WELLS COMPLETED

15-46-64 Federal Oil Co. 2 300

Eastern Fields

Summary of Completed Work

Fields—	Comp.	Prod.	Dry	Gas
Allegany	9	154	0	8
Bradford	41	175	0	0
Venango-Clarion	11	9	1	2
Butler-Armstrong	4	3	1	0
Middle Field	7	7	1	2
Tioga-Potter	8	0	5	3
S. W. Pennsylvania	4	8	2	1
Southeast Ohio	21	109	9	2
West Virginia	20	3	5	11
Total June	125	468	24	21
Total May	124	483	16	23
Difference	1	15	8	2

Summary of Work Under Way

Fields—	Rigs	Drlg.	Ttl.
Allegany	2	7	9
Bradford	13	30	43
Venango-Clarion	2	3	5
Butler-Armstrong	0	7	7
Middle Field	0	6	6
Tioga-Potter	7	17	24
S. W. Pennsylvania	3	9	12
Southeast Ohio	11	22	33
West Virginia	22	35	57
Total June	60	136	196
Total May	48	161	209
Difference	12	25	13

WELLS COMPLETED

ALLEGANY

Fee, Gibson, Merry and Elwood 1
Johnson, Andrew Johnson et al 1
Fee, N. V. V. Franchot, manag.ng trustee 40
Fee, N. V. V. Franchot, manag.ng trustee 50
Fee, N. V. V. Franchot, manag.ng trustee 50
Fee, Mary Lippert 3
Warters, C. M. and F. J. Lippert 1
Childs, First National Bank of Bolivar 18 5
Pierce, F. L. and M. A. Putnam 3

Completions 9
Production 154

BRADFORD

Fee, George W. Smith estate 5
Fee, George W. Smith estate 5
Fee, Mix Creek Oil Co., Inc. 1
Rasey, Chief Producing Co. ..... pressure
Rasey, Chief Producing Co. ..... pressure
Rasey, Chief Producing Co. ..... pressure
Bingham 394, Saph and Wright 3
Burdick, South Penn Oil Co. 1
Kinley, H. H. Harder 1
Fee, J. B. Golden 1
Fee, Sloan & Zook Producing Co. 10
Fee, Sloan & Zook Producing Co. 15
Fee, Sloan & Zook Producing Co. 14
Fee, Sloan & Zook Producing Co. 18
Fee, Sloan & Zook Producing Co. .. pressure
Young, Sloan & Zook Oil Co. et al 2
Fee, C. A. McFadden 3
Newell, E. E. Bryner & Son 4
Newell, E. E. Bryner & Son 6
Griffith, E. C. Tanner estate 2
Griffith, E. C. Tanner estate 3
Griffith, E. C. Tanner estate 8
Cram, Minard Run Oil Co. 3
Cram, Minard Run Oil Co. 2
Cram, Minard Run Oil Co. 4
Cram, Minard Run Oil Co. ..... pressure
Quintuple, Bovaird and Reed 1
Fee, Olean Petroleum Co. et al 20
Smedley, Towne-Melvin Oil Co. 1
Fee, Sloan & Zook Petroleum Co. 1
Melvin, South Penn Oil Co. 3
Melvin, South Penn Oil Co. 2
Melvin, South Penn Oil Co. 2
Melvin, South Penn Oil Co. 2
Bingham 593, P. A. Oakes' Sons Producing Co. 15
Farm 4,219, South Penn Oil Co. 1
Borden, T. P. Thompson, Jr. ..... pressure
Willett, Sloan & Zook Pet. Co. .... pressure
Doubleday, Bradford Producing Co., Inc. ..... pressure
Fee, Myron W. Matson 3
Quintuple, Bovaird and Enright 6

Completions 41
Production 175
Pressure 5

VENANGO-CLARION

Watson, Moses Karien 7 1
Fee, Maggio Oil Co. 5 2
Wurster, United Natural Gas Co. 4,033. gas
Corbett, Corbett and McCoy 1 ..... dry
Shaffer, William Shaffer estate 26 1
Tracts 68-75-76, J. B. Smithman 154 ... 1
Kapp, F. G. Youkers 6 ..... gas
Jerusalem, O. H. Culbertson 12 1
McFadden, J. D., and C. D. Berry 20 ... 1
Stearns, Myers and Ware 11 1
Stull, Rice and Anderson 9 1

Completions 11
Production 9
Dry 1
Gas 2

MIDDLE FIELD

Middaugh, A. L., and L. M. Lilly 2
Middaugh, J. B. Randall ..... pressure
Fee, F. M. Boocks 3
Bordon, Patton and Wilson 2
Kapp, T. H. Kervin ..... pressure
Siggins, Harry J. Jennings 24 1
Vincent, Crescent Oil Co. 20 ..... dry

Completions 7
Production 7
Dry 1
Pressure 3

BUTLER-ARMSTRONG

McJunkin, Kohlmeyer and Purvis 8 1
Zinkham, Ethridge & Co. 2 1
Raybuck, Pittsburgh parties 1 ..... dry
English, M. B. Finnessy 10 1

Completions 4
Production 3
Dry 1

TIOGA-POTTER

Murray, North Branch Development Co. gas
Van Zile, Linderman, Crane et al ..... gas
Wheeler, Lycoming Nat. Gas Corp. .... dry
Morris, Scranton et al ..... dry
Brown, Penn York Gas Co. ..... dry
Nugent, Williamsport Nat. Gas Co. .... gas
County farm, Wells Corp. ..... dry
Schofield, Keefer et al ..... dry

Completions 8
Dry 5
Gas 3

SOUTHWEST PENNSYLVANIA

WELLS COMPLETED

ALLEGHENY COUNTY

Shaffer, Henry Shaffer 3 ..... dry

BEAVER COUNTY

Ramsey, C. T. Andrews et al 6 ..... dry

GREENE COUNTY

Gregg, J. L. Garard & Co. 27 3

WASHINGTON COUNTY

Chambers, Carnegie Natural Gas Co. 2. gas

SOUTHEAST OHIO

WELLS COMPLETED

HOLMES COUNTY

Garver, Henry Garver 1 ..... gas

LICKING COUNTY

Martin, McClay Bros. et al 1 ..... gas
Jeffers, R. W. Earley et al 1 1

MEDINA COUNTY

White, F. Barnhard et al 1 5
Franks, E. R. Edson & Son Co. 35 .... dry
White, F. Barnhard et al 2 ..... dry
Brown, Curtis and Eakin 7 ..... dry
Shaw, E. R. Edson & Son Co. 22 ..... dry
Franks, E. R. Edson & Son Co. 36 .... dry
Hange, Preston Oil Co. 1 ..... dry

MORGAN COUNTY

Finley, R. C. Whitener 1 ..... dry

MUSKINGUM COUNTY

Boyer, M. F. Whitehill 6 ..... dry

NOBLE COUNTY

Woodford, Woodford Bros. 1 ..... ¼
Crum, B. E. King 7 3
Woodford, Woodford Bros. 2 ..... dry
Mallett, Cain Oil & Gas Co. 7 2

PERRY COUNTY

Snider, Mid East Gas Co. 1 5
Longstreth, Allegheny Oil Co. 20 3

TUSCARAWAS COUNTY

Carroll, Gordon Oil Co. et al 2 30
Dayton, Hopewell Fuel Gas Co. 1 45

WASHINGTON COUNTY

Stewart, T. C. Robinson et al 1 15

WEST VIRGINIA

WELLS COMPLETED

CABELL COUNTY

Grass, United Fuel Gas Co. 1 ..... gas
Mt. Terrace Land Co., Merritts Creek Gas Co. 1 ..... gas

CALHOUN COUNTY

Allen, M. & F. Oil & Gas Co. 1 ..... gas
Allen, Harley Ferrall et al 1 3
Bickel, W. H. Bickel 1 ..... gas

BOONE COUNTY

Hill, C. P. Jones 2 ..... gas

LINCOLN COUNTY

Mullens, Cambridge Gas Co. 2 ..... gas
Veikers, United Fuel Gas Co. 1 ..... gas

MONONGALIA COUNTY

Wise-Tennant, H. L. Tennant 3 ..... gas

PLEASANTS COUNTY

Ruckman, H. M. Adams et al 1 ..... ¼

RITCHIE COUNTY

Sandy, Lewis Drlg. Corp. 2 ..... dry
Wilson, Wilson Bros. 3 1

ROANE COUNTY

Guthrie, Reedy Oil & Gas Co. 1 ..... gas
Keene, Deeds Oil & Gas Co. 2 ..... gas

TYLER COUNTY

Arnett, Ohio Oil & Gas Co. 1 ..... dry

WAYNE COUNTY

Guyan Valley Bank, Penn Natural Gas Co. 2 ..... gas

WIRT COUNTY

Hickman, Fred Moorehead 8 ..... dry
Vandevender, W. C. Patterson 19 ..... ½

WOOD COUNTY

Linger, G. C. Alleman Oil Co. 1 ..... dry
Pope, Hugh Prather 3 ..... dry

Lima Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Wood	1	150	0	0	1	2	3
Hancock	1	0	1	0	0	1	1
Seneca	4	30	0	3	0	5	5
Lucas	1	30	0	0	1	0	1
Ottawa	0	0	0	0	0	1	1
Hardin	2	1	0	1	0	0	0
Putnam	0	0	0	0	0	1	1
Wyandot	2	1	0	1	0	4	4
Total June	11	212	1	5	2	14	16
Total May	15	57	5	6	3	22	25
Difference	4	155	4	1	1	8	9

WELLS COMPLETED

HANCOCK COUNTY

Biglick—Bertha Moore, Youngiove & Edmonds 1 ..... dry

WOOD COUNTY

Bloom—Geo. G. Zody, Carl H. Schwyn 25 150
Montgomery—Graham, Ohio Oil 2, 4 ... abd
Amanda Dailey, Van Vleck & Stow Oil 1, 2, 3, 4, 5 ..... abd

Henry—Franks, White & Co., Ohio Oil 4, 14 ..... abd
J. Franks, Ohio Oil 7 ..... abd

Wells completed 1
Production 150
Abandoned 10

SANDUSKY COUNTY

Madison—Chas. Herman, Van Vleck & Stow Oil 2, 3, 4 ..... abd
H. W. Hoessman, Van Vleck & Stow Oil 1, 2 ..... abd
Woodville—John Kaischke, Van Vleck & Stow Oil 1, 3, 6 ..... abd
Henry Ninke, Van Vleck & Stow Oil 1, 2 ..... abd
Washington—Chas. D. Keenan, Van Vleck & Stow Oil 1, 2, 3, 4 ..... abd

Abandoned 14

SENECA COUNTY

Hopewell—Frank Fox, M. R. McPheron & Co. 3 30
E. W. Kuhn, Chas. Ahaul & Co. 1 ... gas
Libery—J. R. Puffenberger, Cessna-Feasel Oil 1 ..... gas
Seneca—James D. Watson, Jones & Coyle 1 ..... gas

Wells completed 4
Production 30
Gas 3

LUCAS COUNTY

Monclova—Dan Knause, John Doblinger 1 30
Oregon—A. Chesbrough, Joseph Casper 12 ..... abd

Wells completed 1
Production 30
Abandoned 1

HARDIN COUNTY

Blanchard—Ora Rush, Bert Sheldon 1.. gas
Pleasants—Trager heirs, Trager heirs 4. 1

Wells completed 2
Production 1
Gas 1

WYANDOT COUNTY

Tymochtee—Oscar Margroff, Erie Oil & Gas Co. 1 ..... gas
Crane—Daisie Smalley, Jones & Coyle 1. 1

Wells completed 2
Production 1
Gas 1

Central Ohio Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ashland	1	0	1	0	1	2	3
Lorain	1	0	0	1	2	2	4
Medina	7	10	5	0	1	2	3
Holmes	1	0	0	1	0	3	3
Richland	0	0	0	0	0	1	1
Knox	1	0	1	0	0	1	1
Coshocton	0	0	0	0	0	2	2
Summitt	0	0	0	0	3	1	4
Licking	2	4	0	1	2	3	5
Muskingum	2	20	0	1	1	7	8
Athens	0	0	0	0	2	3	5
Tuscarawas	2	73	0	0	1	3	4
Stark	3	6	0	3	3	9	12
Guernsey	0	0	0	0	2	5	7
Belmont	1	0	0	1	0	5	5
Gallia	0	0	0	0	0	1	1
Scioto	0	0	0	0	0	2	2
Pike	0	0	0	0	0	2	2
Carroll	0	0	0	0	0	4	4
Crawford	0	0	0	0	0	1	1
Lawrence	0	0	0	0	0	1	1
Total June	21	107	7	8	19	66	85
Total May	29	112	8	15	17	65	82
Difference	8	5	1	7	2	1	3

WELLS COMPLETED
ASHLAND COUNTY

Ruggles—John G. Howe, G. W. Heinrich & Co. 2 ..... dry

LORAIN COUNTY

Columbia—Wm. M. Kloos, McMillan & Co. 1 ..... gas

MEDINA COUNTY

Chatham—J. H. Hange, Preston Oil Co. 1-1,513 ..... dry
Thos. Brown, Jr., Curtis & Eaken 7.. dry
M. A. Frank, Edson Sons Co. 39..... dry
W. A. Shaw, Edson Sons Co. 25 ..... dry
W. A. Shaw, Edson Sons Co. 24 5
Harrisville—W. P. White, F. Bernhard & Co. 1 5
W. P. White, G. Bernhard & Co. 2... dry

Wells completed 7
Production 10
Dry 5

HOLMES COUNTY

Killbuck—Henry Garver, Garver 1 ..... gas

KNOX COUNTY

Howard—H. L. Simpson, H. E. Perkins 1 dry

LICKING COUNTY

Perry—Lida Martin, Whitmer & Clay 4. gas
Madison—Louisa J. Georgetti, Earl Bros. 1 4

Wells completed 2
Production 4
Gas 1

MUSKINGUM COUNTY

Brush Creek—Scott, Hammond, Pure Oil Co. 2 ..... gas
Union—Arthur Taylor, Atha Oil 1 20

Wells completed 2
Production 20
Gas 1

TUSCARAWAS COUNTY

Washington—Martha Carroll, Oxford Oil Oil & Gas 2 35
J. & F. Daton, Hopewell Oil & Gas 1. 35

Wells completed 2
Production 73

STARK COUNTY

Jackson—W. J. Hits, Ohio Fuel Gas 2-5,647 ..... gas
Paul A. Rohr, Ohio Fuel Gas 1-5,656.. gas
John Strouble, East Ohio Gas 3 ..... gas

Wells completed 3
Gas 3

BELMONT COUNTY

Somerset—Patterson heirs, Gibson-Bradfield & Co. 1 ..... gas

Kentucky Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ohio	9	375	1	0	6	4	4
Daviess	10	240	4	0	0	9	9
Hancock	2	20	1		2	7	9
McLean	3	0	3	0	4	8	13
Barren	0	0	0	0	0	2	2
Hart	13	418	2	0	0	12	12
Muhlenberg	3	15	2	0	0	0	0
Knox	0	0	0	0	0	1	1
Webster	2	0	0	2	0	0	0
Edmonson	0	0	0	0	0	1	1
Todd	0	0	0	0	0	1	1
Nelson	0	0	0	0	0	1	1
Taylor	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Bath	0	0	0	0	0	1	1
Breckenridge	0	0	0	0	0	1	1
Christian	0	0	0	0	0	4	4
Hopkins	0	0	0	0	0	2	2
Boyle	0	0	0	0	0	1	1
Cumberland	0	0	0	0	0	2	2
Grayson	0	0	0	0	1	1	2
Pike	0	0	0	0	0	2	2
Total June	42	1,068	13	2	7	62	69
Total May	37	1,435	13	5	10	73	83
Difference	5	367	0	3	3	11	14

WELLS COMPLETED
OHIO COUNTY

Hartford—Dave Brooks, Cumberland Petroleum 6 75
Dave Brooks, Cumberland Petroleum 7 90
Dave Christian, Bolling & Hume 1..... 25
J. W. Christian, Bolling & Co. 1. 100
J. W. Christian, Bolling & Co. 3 25
Earnest Bickett, D. J. White & Co. 4.. 25
S. D. Johnson, Hupp, Duff & Co. 1... 30
C. E. Farmer, J. E. Hare & Co. 1 5
Ramsey heirs, S. A. Cobb & Co. 3 .... dry

Wells completed 9
Production 375
Dry 1

DAVIESS COUNTY

Owensboro—Jim Alsip, Cox & Co. 2 .... dry
E. R. Cooper, Ellis & Ashby 3 40
Dora Cooper, Ellis & Ashby 4 50
Dora Cooper, Ellis & Ashby 5 100
Jackson Bros., Cumberland Pet. & Kenrow Co. 1 ..... dry
Burton heirs, Morrison & Sago 1 .... dry
Wm. M. Tanner, S. A. Weideman 2 .. 10
Will Salmon, S. M. Sherman 4 15
M. D. Wells, Ellis & Young 2 ..... dry
Albert Jackson, Brenner & Adams 6.. 25

Wells completed 10
Production 240
Dry 4

HANCOCK COUNTY

Pellville—Wm. McIntosh, Vicers & Co. 1 dry
Ollie Bolling, D. T. Bolling 3 30

Wells completed 2
Production 20
Dry 1

McLEAN COUNTY

Calhoun—Henry Northern, S. A. Cobb & Co. 1 ..... dry
Himes, Fred Weir & Co. 1 ..... dry
Unknown, Maple & Lyle 1 ..... dry

Wells completed 3
Dry 3

HART COUNTY

Logston Valley—Mrs. E. Seymour, Mud Branch Oil & Gas 4 30
Mike Mathias, Mud Branch Oil & Gas 1 50
Polo Logsdon, Creech & Co. 1 30
Dave Logsdon, Creech & Co. 1 50
Mrs. Felix Wilson, Farmer & Co. 1 .. 40
Mrs. Rance Wilson, Farmer & Co. 1 .. 40
Big Sinking, Carpenter & Frost 1 ... 60
Payton, Carpenter & Frost 4 50
Bradley, Oscar Benton 9 15
H. Grubbs, Oscar Benton 1 50
John Craddock, Oscar Benton 1 3
J. W. Wilkerson, Unknown parties 1.. dry
Joe Thompson, Unknown parties 1 ... dry

Wells completed 13
Production 418
Dry 2

MUHLENBERG COUNTY

Greenville—Mary Corneal, Ellis & Young 1 ..... dry
H. F. Lee, Ellis & Young 1 15
Niagara—Paul Williams, Imperial O. & G. Products 1 ..... dry

Wells completed 3
Production 15
Dry 1

WEBSTER COUNTY

Sebree—Harkins, Security Oil & Gas 2.. gas
Dink Curry, Security Oil & Gas 8 ... gas

Wells completed 2
Gas 2

Michigan Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Muskegon	1	0	1	0	1	0	1
Isabella	0	0	0	0	13	27	40
Midland	11	5,795	2	0	9	25	34
Clare	0	0	0	0	2	1	3
Lake	0	0	0	0	0	2	2
Cass	0	0	0	0	1	1	2
Kent	0	0	0	0	1	2	3
Oceana	0	0	0	0	1	5	6
Emmett	0	0	0	0	1	0	1
Eaton	0	0	0	0	1	0	1
Iosco	0	0	0	0	2	0	2
Montmorency	0	0	0	0	3	0	3
Sanilac	0	0	0	0	3	0	3
Leelanau	0	0	0	0	1	0	1
Gratiot	0	0	0	0	2	0	2
Shiawassee	0	0	0	0	2	2	4
Allegan	0	0	0	0	0	4	4
Livingston	0	0	0	0	3	1	4
Osceola	0	0	0	0	2	0	2
St. Clair	0	0	0	0	1	0	1
Alpena	0	0	0	0	1	0	1
Cheboygan	0	0	0	0	0	1	1
Kalamazoo	0	0	0	0	0	1	1
Oakland	0	0	0	0	0	1	1
Genesee	0	0	0	0	1	0	1
Saginaw	0	0	0	0	5	1	6
St. Joe	0	0	0	0	1	0	1
Mecosta	0	0	0	0	2	0	2
Total June	12	5,795	3	0	59	74	133
Total May	14	12,495	3	0	59	72	131
Difference	2	6,700	0	0	0	2	2

WELLS COMPLETED
MUSKEGON COUNTY

Dalton—Albin Bard, Muskegon Oil Corp. 1 ..... dry

MIDLAND COUNTY

Greendale—Bernard, Pure Oil A-2 250
John J. Bolen, Pure Oil 3 400
A. J. Struble, W. L. McClanahan, Inc. 6 720
Jones-Woodruff, Bertha L. Jones 1... 2000
Frank Adams, Talbot Oil 4 400
W. H. Hill & Co., Columbia Cit & Gas 1 350
N. J. Skinner, Gordon Oil B-4 600
Kate Stapleton, Braden-Saunders Co. 1 1000
C. W. Schaeffer, G-Lee-P. Oil Dev. 1. 75
Geneva—Hughes Estate, W. L. McClanahan, Inc. 1 ..... dry
Ingersoll — Chemical State Bank, W. Hunter Atha 1 ..... dry

Wells completed 11
Production 5795
Dry 2

Illinois Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Coles	0	0	0	0	2	2	
Clark	0	0	0	0	2	2	
Edgar	0	0	0	0	1	1	
Crawford	0	0	0	1	3	4	
St. Clair	0	0	0	0	2	2	
Randolph	0	0	0	0	2	2	
Monroe	0	0	0	0	2	2	
Washington	0	0	0	0	1	1	
Boone	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Jefferson	0	0	0	0	0	1	1
Jasper	0	0	0	0	0	1	1
Marion	0	0	0	0	0	1	1
Total June	0	0	0	0	1	20	21
Total May	2	22	0	1	20	21	
Difference	2	22	0	0	0	0	

WELLS ABANDONED
LAWRENCE COUNTY

Petty—S. E. Hazel, Ohio Oil 7, 19..... abd
Samuel Gowin, Ohio Oil 4 ..... abd
Dennison—P. Critchfield, Ohio Oil 1... abd
Ellen Lutz, Ohio Oil 2 ..... abd
Emma Richey, Silurian Oil 1 ..... abd
Simon Seed, John Phipps 4 ..... abd
Lawrence—Thos. Smith, Ohio Oil 4 ... abd
Bridgeport—C. B. O'Donnell, Snowden-McSweeney Co. 43 ..... abd

Abandoned 9

ST. CLAIR COUNTY

Sugar Loaf — Fred Metler, St. Clair County Oil Co. 3 ..... abd
Fred Metler, Kroeger & Co. 1, 2 ..... abd

Abandoned 3

Indiana Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Gibson	3	230	1	0	1	5	6
Pike	1	50	0	0	0	3	3
Daviess	0	0	0	0	0	6	6
Warrick	0	0	0	0	0	1	1
Sullivan	3	0	2	1	0	8	8
Spencer	0	0	0	0	0	7	7
Perry	2	30	1	0	0	6	6
Knox	0	0	0	0	0	6	6
Marshall	0	0	0	0	1	1	2
Lagrange	0	0	0	0	0	1	1
Putnam	0	0	0	0	0	1	1
Posey	0	0	0	0	0	1	1
Dubois	0	0	0	0	0	2	2
Harrison	0	0	0	0	0	2	2
Hamilton	0	0	0	0	0	2	2
Dearborn	0	0	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Greene	0	0	0	0	0	3	3
Switzerland	1	0	0	1	0	3	3
St. Joe	0	0	0	0	0	1	1
Rush	0	0	0	0	0	2	2
DeKalb	0	0	0	0	0	1	1
Pulaski	0	0	0	0	0	1	1
Elkhart	0	0	0	0	1	0	1
Fountain	0	0	0	0	0	1	1
Orange	0	0	0	0	0	1	1
Johnson	1	0	0	1	0	1	1
Ohio	0	0	0	0	0	1	1
Vandeburg	0	0	0	0	0	1	1
Total June	11	310	4	3	3	70	73
Total May	13	322	6	2	3	63	66
Difference	2	12	2	1	0	7	7

WELLS COMPLETED
GIBSON COUNTY

Washington—Catherine Sloan, Big Four Oil & Gas 6 185
Agnes Haskins, Gib Van Oil 5 45
Mary R. Richardson, Nelson Bros. 1.. dry

Wells completed 3
Production 230
Dry 1

PIKE COUNTY

Logan—E. Loveless, P. C. Andrews 12.. 50
Monroe—I. Seiple, Murphy Oil 1 ..... abd
A. M. Henning, Murphy Oil 5 ..... abd
Washington—L. C. Thomas, Ohio Oil & Bement 1 ..... abd

Wells completed 1
Production 50
Abandoned 3

SULLIVAN COUNTY

Turman—William Bell, Jr., Wyman & Brown 1 ..... dry
Willis Farrand, Wyman & Brown 1 .. dry
Curry—Ross L. Martz, Wm. H. Wood 1. gas

Wells completed 3
Dry 2
Gas 1

PERRY COUNTY

Clark—Frank Cassidy, Conyers & Bugg 5 30
Leopold—James C. Cassidy, Morehead & Black 1 ..... dry

Wells completed 2
Production 30
Dry 1

SWITZERLAND COUNTY

Craig—Vevay, Clarence Carter 1 ..... gas

JOHNSON COUNTY

Franklin—A. H. Vandivier, Waggoner & Co. 1 ..... gas

FULTON, MO., ORDER

JEFFERSON CITY, Mo., Aug. 1.—The State Public Service Commission has extended until August 15 the effective date of its recent order compelling the Panhandle Eastern Pipe Line Co. to sell natural gas to the city of Fulton. The effective date of the order was extended after the commission had set August 12 to hear oral arguments for a rehearing asked by the Panhandle Eastern.

Ross-Meehan Foundries

Manufacturers—

RIVER CLAMPS a Specialty

Williamson Multispeed Winch for Oil Fields
Williamson Drum Units
Electric Steel Castings, Electrically Annealed
"Certified" Malleable Iron Castings
"Meehanite Metal" Castings
Gray Iron Castings
Special Analyses Castings for—
Oil Producers and Refiners

Chattanooga, Tennessee, U.S.A.

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Associated since 1846 with the Scientific American
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1551 Scientific American Building,
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1963 Tower Building, Chicago, Ill.
688 Hobart Building, San Francisco, Calif.
511 Van Nuys Bldg., Los Angeles, Calif.

BURRELL-MASE ENGINEERING CO.,
Design, Construction, Valuation, Tests, Reports.
Law and Finance Building,
PITTSBURGH, PA.

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The rates for Classified Advertisements are 35 cents a line for the first insertion and 25 cents a line for each additional insertion. Six words usually constitute a line. The following table will enable you to figure the cost of your advertisement:

	1 time	2 times	3 times	4 times
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7 lines ..	2.45	4.20	5.95	7.70
8 lines ..	2.80	4.80	6.80	8.80
9 lines ..	3.15	5.40	7.65	9.90
10 lines ..	3.50	6.00	8.50	11.00

For rates on Classified DISPLAY see opposite column.

Compute white space at the above rates.

Mail your Classified Advertisement to

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

For Sale—Equipment

200 AMP. General Electric Arc Welder; portable; 220 V. 3 ph. 60 cy. Complete. Like new. $350. 7x6 Ingersoll-Rand Type ER-1 Air Compressor. Like new. $225. 8x6 Ingersoll-Rand Type ER-1 Air Compressor. Like new. $250. 36"x18' Fifield Screw Cutting Lathe. $650. Also large stock of lathes, shapers, pipe machines, bolt threaders, etc. Send for our list. Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West Second St., Cincinnati, Ohio.

GASOLINE PLANT BARGAINS
We are dismantling gasoline plant near Allen, Okla. Bargains in various size tanks, machinery and pipe. Phone L.D. 501 or write Tulsa.
PRODUCERS PIPE AND SUPPLY CO.

FOR SALE—Dealer closing out entire line of Sullivan Company products.
Konset—$1.25 gallon, now priced 75c.
Slushmix—$42.50 Ton, now priced $25.
Gelite—$40.00 Ton, now priced $25.00.
Stock guaranteed to be first class. Write Box F-251, The Oil and Gas Journal, Tulsa, Okla.

A PRACTICALLY new Sullivan gasoline powered diamond core drill. Address Box F-262, The Oil and Gas Journal, Tulsa, Okla.

Equipment Wanted

WANTED—30 H. P. Deisel Oil Engine. Address Box F-273, The Oil and Gas Journal, Tulsa, Okla.

Business Opportunities

ESTABLISHED EARNINGS
OIL PRODUCING COMPANY paying large monthly dividends from settled production, invites limited additional capital to drill out proven leases. No proration. Exceptional investment opportunity. Fullest investigation welcomed. Responsible representatives also desired to assist financing.
STEED PRODUCTION COMPANY
Fidelity Building Dallas, Texas

WE ARE organized to serve you—"In Mexico"—Oil, Mines, Lands, Concessions, Divorces.
International Business Bureau,
First National Bank Bldg.,
El Paso, Texas.

FOR SALE or lease, very attractive placer mining property in Southwest New Mexico. Address Box F-270, The Oil and Gas Journal, Tulsa, Okla.

For Sale

"CRUDE OIL" East Texas crude oil will ship to any point, Fuel oil, Gas oil. Get our prices. East Texas Fuel Oil Co., 216 Forman Bldg., Longview, Texas.

M. W. RICHARDSON
Buyer of Petroleum Products
Specializing in high gravity Mid-Continent crude oils, gasolines, naturals, kerosenes and other petroleum products.
Hunt Building Tulsa, Okla.

Incorporations

CHARTERS — Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Help Wanted

SALES REPRESENTATIVES in principal cities for NASH'S PETROLEUM DIRECTORY of the United States. References required. Drawer 1136, Dallas, Texas.

AGENTS WANTED
For SYFO (Ink Bottle) and SURWEL (Gyroscopic) Bore Hole Surveying Service in oil fields not yet covered. Those with several years of production experience, well acquainted and of good standing in their local fields apply to Sperry-Sun Well Surveying Company, 1608 Walnut Street, Philadelphia, Pa.

SALESMAN wanted by large tank and equipment manufacturer for Texas. One thoroughly acquainted with oil industry. Address Box F-261, The Oil and Gas Journal, Tulsa, Okla.

EXECUTIVE WANTED—Capable of redesigning and operating small exclusive lubricating oil refinery. Company has own production and marketing in full operation now. Investment required. Address Box F-271, The Oil and Gas Journal, Tulsa, Okla.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Patent Attorneys

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form, Evidence of Conception.
Bulletin "How to Establish Your Rights" and complete information free.
LANCASTER, ALLWINE & ROMMEL
Suite 418-815, 15th St., N.W.,
WASHINGTON, D. C.

Wanted

WANTED—Producing, refining, marketing, properties. Large preferred. Have cash buyers. Information confidential. Immediate action. Address F-272, The Oil and Gas Journal, Tulsa, Okla.

Royalties—Production

MONTHLY INCOME-PAYING Royalties under Oklahoma City and Seminole Wilcox Sand wells offered. W. E. Cook, 342 Court Arcade, Tulsa, Oklahoma.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood, P. O. Box 2261, Tulsa, Okla.

Dealer in Odd Lots
PRODUCING OIL ROYALTIES
I Buy and Sell
John L. Dickson, Box 1113, Tulsa, Okla.

PRODUCING OIL ROYALTIES
Henry S. Severson, Court Arcade,
P.O. Box 1341, Tulsa, Okla.

ROYALTIES under and offsetting Gear wells Ellsworth County, Kansas. Leases and drilling blocks Ellsworth Arch. Also producing royalties in Okla., Kansas and Texas. Special service to brokers and investors. James R. Haynes, Grantville, Kansas.

James B. McAnally
Speculative and Investment Royalties
Hunt Bldg, Tulsa, Okla.

SMALL ROYALTY interests in drilling wells. Kansas, Oklahoma and Texas. Lists and maps free. Harry Haynes, Grantville, Kans.

TEXAS ROYALTIES and Leases. Some in major company blocks. Write H. H. White, Moore Bldg., San Antonio, Texas.

PRODUCING AND NON-PRODUCING
OIL AND GAS ROYALTIES
THE MERCURY COMPANY
Philtower Building, Tulsa, Oklahoma.

WANTED oil or professional man interested in buying participating royalties major company blocks in Texas to write Box F-260, The Oil and Gas Journal, Tulsa, Okla.

ROYALTY DEALERS — Write for terms of exclusive sale option on Seminole and other producing Royalties.
609 Ritz Bldg., B. L. Abicht, Tulsa, Okla.

Leases—Production

FOR SALE—400 acres oil and gas leases cheap Chatham Field, Medina Co. Berea sand consistent, long life, shallow drilling around 400 ft. 35 bbls. well completed Wed. 400 ft. offset well now drilling. Inquire Fred Solomon, Drilling Contractor, Lodi, Ohio.

Classified advertising is productive from a standpoint of unit cost per inquiry running as low as 3c per reply.

Why waste time and money dickering around when you can reach your prospects through the medium they have chosen themselves?

The OIL and GAS JOURNAL
TULSA OKLA.
Classified Department

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The rate for Classified Display Advertising set in similar style to this Ad or in two Column style is as follows for each insertion:

1 inch	1 time	$5.00
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1 inch	26 times	4.00
1 inch	52 times	3.50

Rates for Classified without display shown on opposite column.

One point borders and ten point capitals are allowed, larger type not accepted.

Changes in copy must be in our office 10 days in advance of publication date.

Mail your advertisement to the Largest Classified Section in the Oil Industry.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

Leases—Production

CLOSE IN lease tracts to important well just starting. W. J. Dobbs, 915 Tower Pet. Bldg., Dallas, Texas.

GEOLOGICALLY selected drilling blocks. No bonus. No fees. Nicolle, Box 903, Houston, Tex.

THIRTEEN Sections of land to lease for Gas and Oil in Blocks 94 and 109, Culberson County, Texas. T. T. Moore, Rogers, Texas.

TWENTY-THOUSAND-ACRE block, N-E Colorado Magnetometer "high" Dakota twenty-seven hundred. P. L. Holland, 322 Republic Building, Denver.

Ranches and Farm Lands

DUVAL COUNTY—26,000-acre ranch Northeast of Government Wells Pool, all under oil and gas lease to Major Company, 10-year paid-up lease, with four years yet to run. All fenced and cross-fenced. Improvements, alone, cost $40,000. Fine hunting preserves. Price $5.00 per acre. One-eighth royalty alone worth this. Address Box F-252, The Oil and Gas Journal, Tulsa, Okla.

SAFEST, CHAPEST and best investment ever offered. 5,000 acres on Cimmarron River in New Mexico, beautiful valley, 250 acres in alfalfa, fine improvements, free irrigation water, 3,000 acres tillable, plenty of deer, net annual income $7,500. Write for cash price. Oil structure on land. Otto Stolley, 926 Littlefield Building, Austin, Texas.

Money Raising

JAMES E. MILLER CO., 207½ E. Third St., Tulsa, Okla., will co-operate with responsible parties seeking aid in financing projects of higher order. Valuations, Engineering, Geology.

FINANCE YOUR OWN project with shares bonded. Quickest, most satisfactory known method of raising capital. Information free. Bankers Interstate Security, Electric Bldg., Denver, Colo.

JOHN MORRIS, 3608 WARREN ST., PHILADELPHIA, Pa., invites full facts first letter from capable parties planning negotiation of reasonable capital support for undertakings distinctly of higher order. Use registered mail, safeguard data.

CORPORATE Organizing and Financing—confidential correspondence solicited.
BROOKWORTH.
110 East 42nd St., New York City.

TOUGHER Than A Rhino's Hide HARDER Than the Finest Blade

Made to real precision standards by experienced operators, in one of America's finest and most complete plants—where every modern facility for the expert fabrication of steel products is available. Each piece of raw steel for the bodies tested in our own electric Hump furnace, to scientifically gauge the critical; threads carburized by the world famous Hychrome process, instead of ordinary case-hardening. There's no guess work at any stage of the manufacture of

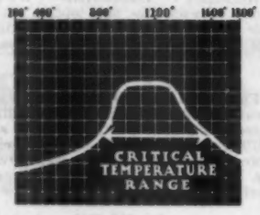
BRIDGEPORT TAPERED TAPS

They "Stand the Gaff!"

Years of experience—scientific engineering—complete equipment; all these are essential in the manufacture of a tool which must withstand such tremendous strains as a tapered tap. But few plants in America are properly equipped for their manufacture.

Bridgeport Tapered Taps are always uniform in quality. Properly heat treated bodies eliminate fear of breakage; properly carburized and heat treated threads assure a thread that will always stand up under the hardest strain, assuring longer, trouble-free service.

In these Electric Hump Furnaces each piece of raw steel used in the manufacture of Bridgeport Tapered Taps is first tested to determine its "critical"—that range of temperatures at which the steel must not be quenched. Thus we eliminate all guess work in tempering.



The Chart shows how the electrically controlled recording instrument accurately gives us the critical temperature range. A similar recording device on our heat treating furnaces enables us to positively steer clear of the dangerous temperature range, in quenching and tempering our steel.

Be Safe—use only Bridgeport Tapered Taps —a precision made tool that assures maximum, trouble-free service.

Bridgeport Tapered Taps, in 3, 4 and 6" sizes are available for quick delivery from any Bridgeport Branch, either for rent or sale. Wire or phone your nearest Bridgeport Branch Store COLLECT—Day or Night. We'll do the rest.

CASH FOR YOUR SURPLUS MATERIAL

Bridgeport is at all times in the market for good grades of used casing, line pipe, Rotary Drill Pipe, Seamless Upset Tubing, etc. Also 40 H.P. Gas or Oil Pumping Engines, large boilers and complete or separate Rotary Units. Turn your surplus material into cash. Write or wire the Wichita office for full details.

BRIDGEPORT MACHINE COMPANY

Wichita, Kansas

Branches Conveniently Located in All Active Mid-Continent Oil Fields

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